AGTCCGGGGG ACCTTTTTAG TCGGTAGATT GAGATTGCAA ACAAATCTGC ATCTACATTG 4860

AAAGCTTAAT TTCTAATAAT TGAAAAAATC GAATGAAAAA TTTCTTACCT TCATTCACAG 4920

AGCTCGATTT CAGAGCTCTT TTTGCTAGCT TATTCATACT TTTCTGAATT TCGAAAAAGA 4980

AATGTAAGCG TTTGATAGAT TTACAAAAAG ATTGTATAAT AGGGATAAGA ATAGAAAAGG 5040

AGAAGTCTCA TGGCAGTTAA AGATTTTATG ACCCGCAAGG TAGTTTATAT TAGTCCAGAT 5100

ATAACAGTAT CTCATGCAGC AGATTTGATG AGAGAGCAAG GTTTGCACCG TCTGCCTGTT 5160

ATCGAAAATG ATCAATTAGT TGGTTTGGTG ACTGAGGGAA CCATTGCACA AGCAAGTCCA 5220

TCTAAAGCAA CAAGTCTTTC TATCTATGAG ATGAATTATC TTCTGAATAA GACAAAAGTA 5280

AAAGATGTCA TGATTCGCGA TGTTGTCACT GTCTCAGGCT ATGCTAGTCT AGAAGATGCA 5340

ACTTATCTGA TGTTGAAAAA TAAGATTAGT ATTCTCCCTG TCGTAGATAA CCATCAAGTA 5400

TACGGAGTTA TTACTGACCG TGACGTTTTC CAAGCCTTTC TTGAAATTGC AGGTTATGGC 5460

GAAGAAGGGA TTCGTGTACG CTTTGTTACA GAAGATGAAG TTGGTGTTCT TGGAAAAATT 5520

GTTTCTTTGA TTGTAGAAGA AAATTTGAAT ATCTCCCATA CAGTCAATAT TCCGCGTAAG 5580

GATGGTAAGG TGATTATCGA AGTGCAAATC GATGGATCAA TTGATTTACC AGCCTTGAAA 5640

GAAAAATTTG AAGCAAATGG TATTCAAGTG GAAGAAATCG CTCGCACTTC AGCAAAAGTC 5700

TTGTAAGAAG GGAAGCCCAA AGGCTTCTTT TTTCATGAAA AGGGGATTAG AGCAAAAGAT 5760

GGAAAGAAAT GATAAAATAT GCTATAATGA AATAATGTAA AAAAGGAGTA TTTATGGACA 5820

TTTCAGTAAT TCGTCAGAAA ATTGACGCAA ATCGTGAAAA ATTAGCTTCT TTCAGGGGGT 5880

CTCTTTGACC TCGAAGGGCT AGAGGAAGAG ATTGCCATCT TGGAAAACAA GATGACAGAA 5940

CCTGATTTTT GGAACGATAA TATTGCGGCC CAAAAAACGT CGCAAGAATT AAATGAATTA 6000

AAAAACACTT ACAATACCTT CCATAAGATG GAAGAGTTGC AGGATGAAGT CGAAATTTTA 6060

TTGGATTTTT TGGCTGAAGA CGAGTCAGTG CATGATGAAC TGGTAGCGCA GTTAGCCGAA 6120

CTTGATAAGA TAATGACCAG CTACGAGATG ACTCTACTCT TGTCAGAACC TTATGACCAC 6180

AACAATGCCA TCTTGGAAAT CCATCCAGGT TCTGGTGGTA CTGAGGCGCA GGACTGGGGT 6240

GATATGTTGC TTCGTATGTA TACTCGTTAT GGTAATGCTA AAGGCTTTAA AGTGGAAGTG 6300

TTGGATTACC AAGCAGGTGA TGAGGCTGGT ATTAAGTCGG TAACTTTATC ATTTGAAGGG 6360

CCTAATGCCT ATGGTCTCCT CAAGTCAGAA ATGGGTGTTC ACCGCTTAGT GCGAATCTCA 6420

CCATTTGACT CTGCCAAACG TCGCCATACC TCTTTCACAT CTGTAGAAGT GATGCCAGAA 6480

TTGGATGATA CTATTGAAGT GGAAATCCGT GAAGATGATA TCAAGATGGA TACCTTCCGT 6540

TCAGGTGGTG CCGGTGGACA AAACGTCAAT AAGGTTTCAA CAGGTGTACG TTTAACCCAC 6600

ATTCCAACTG GAATTGTTGT CCAATCAACA GTAGATCGTA CCCAGTATGG AAATAGAGAT 6660

CGTGCCATGA AGATGTTGCA GGCTAAGCTC TATCAAATGG AGCAAGATAA GAAGGCTGCG 6720

GAGGTAGATT CTCTCAAAGG TGAGAAAAAG GAGATCACTT GGGGAAGCCA AATCCGTTCT 6780

TATGTCTTCA CGCCTTATAC TATGGTAAAA GATCACCGAA CTAGCTTTGA GGTTGCTCAG 6840

GTAGATAAGG TTATGGATGG GGACCTAGAT GGTTTTATCG ATGCTTATCT CAAGTGGCGA 6900

ATTAGCTAAG ATAGAAAGGA ACTCACATGT CAATTATTGA AATGAGAGAT GTCGTTAAAA 6960

AATACGACAA CGGAACAACT GCTCTACGCG GTGTTTCGGT TAGCGTTCAA CCGGGGGAAT 7020

TTGCTTACAT CGTAGGACCT TCAGGAGCAG GGAAGTCAAC TTTTATTCGT TCTCTGTATC 7080

GTGAAGTAAA AATCGATAAA GGAAGCCTAT CAGTTGCTGG TTTTAATCTG GTTAAGATCA 7140

AAAAGAAAGA TGTCCCGCTT CTACGTCGTA GTGTTGGGGT TGTCTTCCAG GATTATAAAT 7200

TGTTACCAAA GAAAACTGTC TATGAAAATA TTGCTTACGC TATGGAAGTA ATCGGGGAAA 7260

ATCGCCGTAA TATCAAAAGA CGAGTGATGG AAGTTTTGGA CTTGGTTGGA TTGAAGCATA 7320

AGGTTCGTTC TTTCCCAAAT GAACTCTCAG GTGGGGAGCA ACAGCGGATT GCGATTGCGC 7380

GTGCAATTGT AAATAATCCC AAAGTATTGA TAGCTGATGA GCCAACAGGA AATCTGGATC 7440

CGGATAATTC ATGGGAAATT ATGAATCTCT TGGAACGGAT TAACyTACAA GGAACAACTA 7500

TTTTGATGGC GACTCATAAT AGCCAGATTG TAAATACCTT GCGCCACCGT GTCATTGCCA 7560

TTGAAAATGG CCGTGTCGTT CGTGACGAAT CAAAAGGAGA GTATGGATAC GATGATTAGT 7620

AGATTTTTTC GCCATTTATT TGAAGCCTTA AAAAGTTTGA AACGAAATGG TTGGATGACA 7680

GTAGCTGCTG TCAGTTCAGT CATGATTACT TTGACCTTGG TGGCAATATT TGCATCTGTT 7740

ATTTTCAATA CAGCGAAACT AGCTACAGAT ATTGAAAATA ATGTCCGTGT AGTAGTTTAT 7800

ATCCGAAAGG ATGTGGAAGA TAATAGTCAG ACAATTGAAA AAGAAGGTCA AACTGTTACA 7860

AATAATGACT ACCACAAGGT ATATGATTCT TTGAAGAACA TGTCTACGGT TAAAAGTGTT 7920

ACCTTTTCAA GTAAAGAAGA ACAATATGAA AAATTAACCG AGATAATGGG AGATAACTGG 7980

AAAATCTTTG AAGGAGATGC CAATCCTCTC TATGATGCCT ATATTGTAGA GGCAAACACT 8040

CCAAATGATG TAAAAACTAT AGCCGAAGAT GCTAAAAAAA TTGAAGGTGT CTCTGAGGTT 8100

CAAGATGGCG GTGCCAATAC AGAAAGACTC TTCAAGTTAG CTTCATTTAT CCGTGTTTGG 8160

GGACTAGGGA TTGCTGCTTT GTTAATTTTT ATCGCAGTTT TCTTGATTTC AAATACCATT 8220

CGTATTACCA TTATTTCCCG CAGTCGCGAA ATTCAAATCA TGCGCTTGGT CGGAGCTAAA 8280

AACAGTTATA TCCGTGGACC GTTCTTGTTA GAAGGAGCCT TTATCGGTTT ATTGGGAGCT 8340

ATCGCACCAT CTGTTTTGGT CTTTATTGTT TATCAAATTG TTTACCAATC TGTCAACAAA 8400

TCGTTGGTAG GGCAAAATCT ATCCATGATT AGTCCAGATT TATTTAGTCC GTTGATGATT 8460

GCCCTACTAT TTGTGATTGG GGTTTTCATT GGTTCATTGG GATCAGGAAT ATCCATGCGC 8520

CGATTCTTGA AGATTTAGGT AAAATAGCTG CTTTTATGAG GAGATTGTAA AATCTCCTTT 8580

TTTGCTACAA GAGTTTTTGA AAAGAGATGC GCAGAAGAAA AGAGCTTCCA AAGAAGTCCC 8640

CCAGAGAAGA CTTC 8654

(2) INFORMATION FOR SEQ ID NO: 99:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 19718 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 99:

TGTCGCGTCA AAATCATTAC TATGGCTATG TATAGCCCTT ACTATGACTT GGCTAAACAC 60

GTTCGCTTTC AAATTTCTAG GCTCAGGCTG AAACAGTCTC CCAGGCTGTT CACTCCCGAA 120

TGCTAAAATC GTTCTTGATC GCTTTCACAT TGTACAACAT CTTAGCCGTG CTATGAGTCG 180

TGTGCATGTC CAAATCATGA ATCAGTTTCA TCGAAAATCC CATGAATACA AGGCTATCAA 240

GCGCTACTGG AAACTCATTC AACAGGATAG CCGTAAACTG AGTGATAAGC GATTTTATCG 300

CCCTACTTTT CGCATGCACT TAACAAATAA AGAAATTCTT GACAAGATTT TAAGCTATTC 360

AGAAGACTTG AAACACCACT ATCAGATCTA TCAACTCTTA CTTTTTCACT TTCAGAACAA 420

AGACCCTGAG AAATTTTTCG GACTCATTGA GGACAATCTG AAGCAGGTTC ATCCTCTTTT 480

TCAGACTGTC TTTAAAACCT TTCTCAAAGA TAAAGAAAAG ATTATCAACG CCCTTCAACT 540

ACACTATTCT AATGCCAAAC TGGAAGCGAC CAATAATCTC ATCAAACTTA TCAAGCGCAA 600

TGCCTTTGGT TTTCGAAACT TTGAAAACTT CAAAAAACGG ATTTTTATCG CTTTGAACAT 660

CAAAAAAGAA AGGACGAAAT TTGTCCTTTC TCGAGCTTAG CTGACTTCAA CCCACTACAG 720

TTGACAAAGA GCCTAATTTC CATAAAAATT GACATGGAAA TTATAAAACC ATTACTAGTT 780

TAGTCCTTTT TGATAACGTG CCAATTCGGC TTGGTTCGCC CAAACATAGT GACCTGGACG 840

GATTTCTACC ATAGATGGCT TATCAGTCTC ATAGTCGTGT TGACTTGGAT CGTAAACCTT 900

CAAGACCTTC TTACGTTCCA AGATTGGATC TGGGATTGGT ACCGCTGAAA GCAAGGCTTG 960

AGTATATGGG TGAATTGGAT TGTTAAACAA TTCTTCTGTT TCTGCAACCT CTACAATAAC 1020

ACCCTTGTAA ATAACTGCGA TACGATCTGA AATAAAGCGA ACAACCGACA AGTCATGGGC 1080

GATGAAGAGA TAGGTCAGGC CGAGCTCTTT TTGGAATTTT TTGAGCAAGT TCAAGACTTG 1140

GGCACGTACA GAAACGTCCA AGGCTGAAAT TGGCTCATCT GCAATAACAA AGTCTGGTTG 1200

CATGACCAAG GCACGGGCAA TACCGATACG TTGACGTTGA CCGCCTGAGA ATTCATGAGG 1260

GTAACGAGTC AAGTGCTCAG CAAGAAGACC TACTTCACGG ATAATATTTT GAACTTTCTC 1320

TTTACGTTCT TCTTCATCCT TAAATAAACG GTGATTGTAA AGACCTTCAG AAATAATATA 1380

ATCAACAGTC GCACGTTCAT TCAAACTTGC GGCAGGGTCT TGGAAAATCA TCTGGATTCG 1440

ACGAATCAAT TCCGCAGCTT GTTCACGCGA TTTCTTACCA TTAATCTTTT GACCATCAAA 1500

AATGATATCT CCATTACTTG TATCATTTAG ACCGATGATA GCACGACCAA TAGTTGTTTT 1560

CCCACTACCG GACTCACCTA CAAGCGAGAA AGTTTCTCCC TTGTTGATAA AGAAGTTAGC 1620

ATTTTTAACC GCGACAAACT TCTTACTTCC TTCACCGAAG GAAATTTCTA AATCTTTGAT 1680

TTCTACTAAT TTTTCAGACA TTTCCTTCCT CCTAGTCAGC CAGATGGGCA AATCCCATTT 1740

TTTCACGGAT CTTATCATGG AGATTTGCAA TCACAGCTGG TTTTTCTACT TTCGGAGCAT 1800

CCTCATGAAG AAGCCAAGTT TTAGCCCAAT GTGTCTCTGA TACTGAGAAT TGAGGAGCTT 1860

TTTGTTCGAA GTCAATCTGC ATTGCGTAGT CAGAACGCAA GGCAAAAGCA TCCCCTTTCA 1920

GGTCAGTATA AAGTGACGGA GGTGTTCCTG GGATTGAGTA AAGATCCCCT TTATCATCAG 1980

CAAGCTGAGG CAAGCTAGAC AAGAGACTCC ATGTATATGG ATGGCGAGGG TCATAGAAGA 2040

CTTCCTCAAC CGTTCCATAC TCAACGATTT CTCCTGCATA CATAACCGCT ACCTTATCCG 2100

CAATACTTGC CACCACACCA AGGTCGTGGG TAATAAAGAT TGTTGTGAAA TGATACTCGT 2160

TTTGTAAAGA TTTTAGCAAA TCAATAATCT GAGCTTGAAT AGTTACATCC AAGGCAGTTG 2220

TTGGCTCATC ACAGATCAAG ACATCAGGTC GGCAGGCAAG GGCAATAGCA ATAACGATAC 2280

GTTGACGCAT TCCTCCAGAA TATTGGAATG GGTATTCATT AAAACGTCTA TCTGCGTCTG 2340

GAATGCCAAC CTTATTCATG TAGTCAATGG CCAATTCTTT CGCTTCTTTA GCTGTTTTTC 2400

CTTGGTGTTT TACAATAACT TCTGTAATCT GACTACCAAT TGTTTTAATG GGGTCCAAAC 2460

TAGTCATTGG GTCCTGGAAG ATAGTCGCAA TCTTAGCACC ACGAATTTGT TCCCAATCCT 2520

TGTGAGAAGA TAAAGCTGTC AAGTCCTGAC CACGGTAGTC AATACTACCT TGGGCAATAC 2580

GACCATTTTC TTCGAGCATA CCTGTGAAGG TCTTTGTCAA AACAGATTTA CCTGATCCTG 2640

ACTCACCTAC CAAGGCTAAT ACTTCTCCTT CGACTAGTTC AAGGGAAACG CCGCGAATGG 2700

CTGTCAATAC TTTGTCACGA ACGTCAAATT CCACGACAAT ATCGCGAGCA GTCAAAATTA 2760

CATTTTTTTC TTTTGTCATT TCTACTCCTA TCTATGTGTA CGTGGATCAC TAGCATCCGC 2820

TAAGTTTTGA CCAACTACGA AAAGGGACAA GGATACCAAG ACAAGGGTTG TCAATGGAAT 2880

CCAGAACAAG TAAGCATTGG TTGTTACGTT TTGTGAATAA TCCGAAATCA AACGACCCAA 2940

ACTTGGCACT GTAATCGGTA ATCCAAGACC GAAGAAAGAC AAGAAGGCTT CGTATGAGAT 3000

AAAGCTTGGA AGCATTTGAG TCATGGTTGT CACAATAACA GATACCAATT GAGGCATGAT 3060

ATTTTTGGCA ACAATCTTCA AGGTTGGTGT TCCCAAAGTA CGTGACGCCA AGTTGTATTC 3120

CAAGTCACGA TAGCGCAAGA TTTGCACACG GATCATGAAG GCAATACCAA TCCATGTTGT 3180

TACGCTCATG GCAAAAATCA GATTCCAGAA TCCAGCTCCG ATTGAGTAAG TCAAGACAAT 3240

AACAATCAAA AGAGGTGGGA TGTTTGAGAT GACGTTGTAA ACTTCCATCA TGACACGGTC 3300

AACTGATTTT GAAATACCCC AAATACCACC GACAAAAACA CCGATAACCA AGTTAATCAC 3360

TGTCGCAATC ACAGAAATGA GGATGGAGTT ACGAGCTCCG AACCAGACAC CGTCAAAGAG 3420

CGATTTACCG TTACTGTCAG TACCGAACCA ATGCTCCGCA TTTGGCTTGA TATAACGAAC 3480

ACTAAAGTCG TTTACCTTGC TGACATCATT GAAATCAAAC TTAGAAAACA TTGGGTAGAT 3540

GAAACTTATC AAAATGATGG CTACCAAGAT TCCCAACATG ACTACAGTTG ATTTTTTCTT 3600

CATAAATTGT TTAAACACTG ATTTCCAGTA AGAATATGCT GGCGCATCAA TAGTTTCAGA 3660

GGCAAAATCG TCACGTTTTA CAAACTGAAA TTTTTCTTTA TCGATTGTAG ACATTATTTG 3720

CCTCCTTTCT CAGTCAATTT AATACGTGGG TCAATAATAG TCATCCAAAT ATCTCCCAAA 3780

AGACGTGAGA AGATAGAAAT ACATGTAAAG ATGAAGACAA GACCAACGAC CATAGAGTTA 3840

TTAGATGCTT TTACAGAGTC AATCAACATT TTACCCATAC CTGGGAAGGC GAAGACTGTT 3900

TCAGTAAGGG TTGCACCACC GATAACCCCA ATAATGGCAG CAGGAATTCC TGAAACCAGC 3960

GGAACCATGG CATTTTTAAA GATGTGTTTG TTTGAAATTT CTTTTTCAGA CAAACCTTTT 4020

GCACGAGCGA AACGAACAAA GTCTTGAGAT TGCAAGTCAA TCATGTAACG ACGAATCCAA 4080

ATGGCTGTAC CAGGAGCACC CAACAAACCA AGGATGACTG CTGGTAAAAC GTAAGAACGC 4140

CAATCTCCAG CTCCCAAGAT AGGGAATGAA TCTGGAAGGG CAATAGATGA TCCAATCAAT 4200

CGAACGATGT AAACCAAGGC AATCGTTGGA AGAGCAAGCA AGAAGGTCAA AGCCCCTGTT 4260

GAGAGGCTAT CAATCCAAGT GTTCTTGAAA CGAGCCATGG CTGAACCAAG TGGCACGGCA 4320

AGAGCATAGG CAAGAACCAA ACCAATCAAA CCAGTAATAG CAGAGCTGAC AATCATAGAT 4380

GGATATTGGT AATTACTTTC AGTCGCTGTA TAAGGATCAT CTTTCCCATA GCTAGCTACT 4440

TCACGAGAGT CAGCCTGACT AGGTGACTTG TAGGTTCTTG AGTAAATATT TACAGAAGAC 4500

GTTTTCTTAC CTGTTGGGAA CTGAACTTGG GCAGTTTTGG TTTGTCCTTG ACCTTGAGTA 4560

ATAACCTGAA GAACTGGTGT ATTAGCATAG GTTGGGTAAG AGTCACCTAA ATTCAAGTTC 4620

ACAAAGTTTT GATGAACAAA TGGGAACTGA CTGTTAAAGT ACAAGAGATA TTTATGTTTA 4680

GTTCCTGAAC CGACCAATGA CCATCCGATA GCTGGATCAT TTTCAAAACG AAGGTAGCGT 4740

TTCAAGTCTG GATTTTCAGG GTCTTGGATT TTATTTGTAT GGTCAATGTC AATCAAGTTA 4800

GCATAGAAGT GAAAAACACG TTCAAAAATT GGAATTTCAC GAGTAGCATA GAATTGACCA 4860

CTTTCAGTAA ATTCTCCCAA AGTCCAACCA TGACCTAATT GATTGATGTA CTTTTCATAA 4920

ATAGCTTTAT TGGTCGCATT TGCTTCTACT GTTACAGAAG AATCCATGCT ACTTGCCTTT 4980

TCTTGCAACT CTTTAGTATC GTAATACTCA ATGTAGCCCA TACGCTCAAA CACAGTATTT 5040

TCATAGTTAT CACGTTTATC AGCCGTTGTC GCAATTTTAT TATAGTTAGG ATCCTGCTTG 5100

AAAATCAATT TTCGAGGAAC CAAGGTATAG ATAATCGTGT AGGTCAAAGT CGTTACTAAG 5160

AAAATCGAAA CCAATGACCG CAAAACACGC ATAAAAATAT ATTTTTTCAT ATTATTTCCT 5220

TTAAAAATCC CAAAAGAACC TTCTCCTCAT GGAGAGAAAG TTCTATTAGA AATTATTTAC 5280

TTCACATGAC TTGCCAATTC TTTTTGAGCT TTCTCATTTG ATTCAGCTTT TTCTTTCAAC 5340

CATTTTTCAC GAGCTTTTTC ATACTCTTCC TTAGTCACCA CTTTATCTTG TGATTTCAAA 5400

TATTTGAAGT AAACATCTGA CCCCTTAGAG CCTGTTTGCG CAGAAGCTCC AGTAAATGGA 5460

ACAATTCGTG AAAGCACTGG TGCTGCACCA GAAGAAGCCA TAGCAGGAAT AAAGAGTGAA 5520

CTATCTGTCA ACCATGCTTG AGCCGCTGCA TATTTTTCAT AACGGACATT CAAGTCGCTT 5580

GTCTCTCTGG CAGCTTCATC AACTAATTTA TCGTATTCTT TCAAACCAAC TTGAACTACT 5640

GAAGGGCTAT TTGGATTATC AAATCCTAAA TATGTTTTTG TAGTTTCACT GCTAGTTGTT 5700

TTTAAAATAT CCAGGTAAGT AGATGGGTCT TGATAGTCTG GCCCCCATGA AACTCCTCCT 5760

GATACATCCC AATCCTCAGA TGAAGCATTG GCAGCATAGT AAGTAATATT AAGGAATTCA 5820

TCACTTGTCA TTTGTTGAAT ATCAACAACG ACATTTTCAA CACCAAGAAC TGTTTCTACA 5880

GATTGTTTAA AGGACTGAAT ACGAGATATG TAGTTTTTTG ATGCTTGGTC TACTGGAACG 5940

TCCAGATGAA TAGGAAACTG AACGCCGTCT GCTTCTAAAG CTTTCTTAGC TTTCGCAAAC 6000

TCTGCCTTGG CCTTGTCAGC ATTGAATAAA CCATCCTGCC CATCAGCTAA ATTCACACCT 6060

TTCCACTCAT CACCATAAGC AGGAAGTTGA GCAGCGACTA AATCACCAAA GGTCTTCTCA 6120

CCAGCTGAAA CAAAGTCTGG TTTTACAAAT AAATTACGAA CTGCTAAAGC TGCTCCATCT 6180

TTACCATTGA TTTGAGCTGA GTAAGCTGAG CGATCAAGAG CAAAATTCAA GGCTTGACGG 6240

AAATCTTTGT TAAGCAATGC CTTCTTAGTA GCTACTTTCT CTGAATCTGT AGTTTTAGAA 6300

GTATAGTTGT AACTTTGGCG ATCAATATTC ACACCCAGAC CAGCAATCCC AGAGCCTGAT 6360

TGTGTGTAAT AGATATTGTC CTTGTATTCT TCTGCAACCT TAGAATAGTT GGAGCTGGTA 6420

GGGTAAAGAC GGGCATAACT ATAAGCTCCA CTAGTGAAGT TACGCTCTAG CGACTCCTGA 6480

TCTGATCCAT CATAGTAAGC TAGATTGATA GTATCTAGGT GGACATTTTC TTTATCCCAA 6540

TATTGCTCAT TTTTTACAAA CTCTACAGAA GATTTTGCAG TCAACCCTTT CAACAAGAAT 6600

GGACCATTAT AAAGCAAGGA TGTCGGATCT GTTGGTTTAG CAAAATCGCT TCCTTTTGAT 6660

GTTTCGAATT CTTCATTCAG AGGCCAGAAA ATAGAATAGG TCAACTTAGA GTTCCAGAAC 6720

GGTTCAGGCT GGTTCAAAGT GTATTGTAAC GTATAATCAT CAACCGCCTT GACACCAACT 6780

GTTGAAAAAT CTGTTGAAGT TCCTGATAGA TAATCTGCCA AGCCTTTAAC CGAATTTTCA 6840

GCTAAATACA TAGCTTCTGA TTTTTTATCT GCTGCGTGTT TTAAACCGTT CACGAAATCT 6900

TTAGCCGTCA CCTCTGCATA TTCTTCTCCA TCAGAGGTAA ACCATTTAAC CCCTTTACGA 6960

ATCTTATAAG TGTAGGTCAA ACCATCCTTA GAGACTTCCC AATCCTCTGC AACTGCAGGA 7020

GCAAGATTAC CGTAATTATC GTTAGTGAAT AAACCATCAA TCCCATTTGA AGTCACTACT 7080

GTTGTACTAT TTTTACTTGA AATCAGGTAG TCCAAGGTTT CTGGGTCTGC TGTATAAACA 7140

TAGCCATAAG CTTTAGGGGC TGATGAATCA GATGATTTTG AAGAACTGCA TGCTGCAAGT 7200

ACACCTGCTG CTAATAAAAC AAGACCTGCT GTAGCAAATA CACGATTTTT TTTCATTTTC 7260

TACTCCTCTG TTTATGTGAA TTATAGATTG ACAACCATTA TATCACATTA TCCATTAAAA 7320

ATCAAACAAA TTTTCAGAAT ATTTAGGCTT GTTGGCACAA ATTTTTCATT TTTTTTGAAT 7380

ATATGATTCA AATTGTCGTT CGAAGTGTCA AAGACTACAG TGAAAATAGG AAATTTGACG 7440

CAGAAACTTT GGAGTTTAGG AAGACATACA GTAAAATGAA ATACGGACGG AACAATGTGA 7500

TTTTGGAATT CAAATTAAAT TATAACAATA TTGTAGAAGT ATCATTCTAG TATTCAAGAT 7560

TCAGTTTACT ATGTCTTTTC ACACCAACCT TATCCCGAAT TCAATTACTT TTGTGATTTA 7620

CATATATAGA TTAAGACTAT CTTTTATACT TTAAAATTTC TCGCTACCTT ATCCACTATA 7680

TGCTCCTCGC TATCACGTTT CTATTCATAG CCTACGATTT CACTATTGCT TTCTCTGACA 7740

ATTCTTATTT CCTGCGTCAG ACTTAAAACG ATCTATCCCC AGACCATTTT AATCCGCTAC 7800

CTCACGATAG TCAGGCTTGG GGAGCGCTAT TGTATTCACC GGTAGTGGAG CCCTACAGAG 7860

GACTTACACC TCAGATGCAC GACATGCCCA TCGTATAAAA AATCTCCTAC CCAAGGTAGA 7920

AGATTTCAAA CTTATAAAAC TTAATCCGTC ATGTCCGATA CCAACATTCG ATGCTCCAAT 7980

GGAATACTGC ACATAACTAG CAAGAAAATA AAGCCTGACT GAATCCAGAA GAGAGCCAAG 8040

TCAAAAATTC CGTGCACAGC AACCACTGTA AGGAAAGATA GATAAAGGCC GATAATCGGA 8100

CGTTTCCCCG ACTCCTGACT CATATCCATC ATCAAGCGAA CAGGAGCAAC AGAAGACAAA 8160

ACTAATAAAA TAGTCCCCAC AATTCCGTAA CTCAGAATCG TATCAATATA AAGACTGTGG 8220

GCATGTTCAT GATAAGGAGC ATGTATCCGA GGATAAGAGT TCATATAGGT CAATGGCCCT 8280

TCACCCCAAA AAGGATTTTG CTTAAACAAG GCCATCCCAG CATCCCAGAT AGAAATGCGT 8340

TCTTCCATAG AAGAGTCTAA AGTACCCATT CGAACTCCCA AATCACTAGA AAAGAGGAAA 8400

CTCAAACCAA TCGCGAAGAC CCCAATACTA AGCCAAAAGG CCTTCCAGTT TTTAATAGTC 8460

GTAAAGAGAT AGATAATTGC TCCAGCGATA ATAGCAGGAA AGGCAGTTCG ATTTTGAGTA 8520

AAGTTCAAAC CAAAGAGATT AACAAAGCCT GCAATCACAC AGAATACTTT CAACCAATTC 8580

AACTTGGTCG TTGTAAACAG ATAGAAAGCA ATCATAATAC AGAAACAACA AATAATTCCA 8640

TAATAATTAG GATTAAAGAA GGTCACTTCT GCCCGGTTCT GATGCCACAC CTGCATATTG 8700

GGTGAAAGAA AAGCATAGTT AAATTTCTTC ACAATTTGGA AATGTTCTAA ACTGGCAAAA 8760

GCAGCTGACA AGACACTACC AAACAAGACA AACTGCAAAA TCAATCGAAA GAATTTATGG 8820

GATAAAATCG ACTGATAGTG CAAAAAGAAA ATAGTAAATA GAAACATTCC TACTGAAGCC 8880

ACAAGACCCA TCCAATTTTG TGCAAGAATG GATATAACAG TACTATAGCT AAGAAAAAGA 8940

AGCAGCATCG GATGCTCCCC CATTTTCTGA AGAATACTTT TCATGTCTCC TGTAAAAATC 9000

AAACTGATAA TATATAAACA GAGTACAACT ACAAAAAGAT AAAAGGGTAA AAAGATACTC 9060

AGGATAATTC CCAATAAAAT CAGCTCTTTA CTAGACAACC CCTTCAGCTT TTCAATAAAG 9120

CCTATTGATT TCAAAATGAA TCCTTTCTCT CCAAATCAGC TGATTCAGAT AATAGTAAGC 9180

TATCCTATAT TGTACCACTT TTTTAGCAAT TTGAAAACAA AGGAAACGTT TTCCAAAATA 9240

AAAACCCTAT TTTATCCACC ATATCAAGGC TTCAAAATGA TACTTCAACT CCATTCTCAA 9300

TTACCCGATA AGTCTGATTT TGCAAATCAA TTTCTACTAC TGCTGTTACG GACTTATCTT 9360

TATTTTGACG TTTGATTACA ATGCTGTGAG CTGTTGGTGT CTCTATCTCA GTAGTCCCTT 9420

CTAGATCAAA GGCTTCTGAA CGGTTACGGA AAGAAAATAG ATTGAGAAGG GCCTTCACAA 9480

CAGGTCGTTG CACTTCTTTT GCTATTTCCT CGTTGCTATA GTAATGACGA TTAATATTTC 9540

GACCTTCTTT AGTTTCTTCT AATAATTTCA AGTCATTCTT GCCTGCTAAT AGACCCACAT 9600

AGTAAATCTG AGGAATACCT GGGGCAAAAG CTTGAATTAG ACGAGCGAGA AAATACTTGA 9660

CATCATCATC TCCAAGCGCT GAATAGTAGG TTGAATTGAT TTGGTAGATA TCTAAGTTGT 9720

TATACTCGGC ACTAGAGTAC TTACGTTTGA CATTGGCTCC AACCTTATAG AGTTCATTTG 9780

AAGCATAGTC AATCTCCTCA TCGGTCAGGA TATCCTTGAC ATCTACTACT CCAATCCCAT 9840

CATGGGTATC TAGCGTCGTA AATTGCTTCA TCGGGCTCAT CTTTAACCAC TTAGCCAAAC 9900

GCTCTGTTCT GGAACTGTAA AGAGTATAAA GTGTCACCAT TGGAAGAGCA AAATCATAAA 9960

CATAGTAATC ATGGTCTGCT ATTTTAAACT GAATCGAATA GTGTTCATGA ATCTCAGGTA 10020

AAAGCTCTGT CCCATACTCA GCAGCGATAT CTCGAACTTT GTCCAATAAA TCCCAAATAT 10080

CTGGTTCCAC AAAGAAATCA TTAGTATCCA ATTTCTTCAC TGCATAAGCA AAGGCATCTA 10140

GACGAATCAA ATCACACCCA TTACTTGCCA AGTGCTGAAT GGTCTTACGG ATAAATTCCA 10200

TAGTTACTTC TTTGGTCACA TCAAGATCAA TCTGCTCCTC ACCAAAGGTA TTCCACAAAT 10260

GTTCCACTGA ACCATCTTCA AACACAATCT CTTGCTTTGG TGCACGATCC TTACGCTTGT 10320

AAATTAAATC TACATCAGAC TGTGTCGGAC GGTTTTCTGG CCAAAACTTA TCCCAGTTTA 10380

AAAAGAGAGC TTTAAATTCA CTGGCTTCAT GTTTTTCTTG ATAGTCCTTA TAATACTTGG 10440

ATTGACGAGA AATATGATTA ATCATAAAAT CAAACATAAG ATAATATTTC TCACCTAAAC 10500

GCTTCACATC CTCCCAATCA CCAAAAGCTG AGTCCACTTC GTCGTAGTCA ACTGGCGCAA 10560

ATCCACGATC AACTGTTGAT GGGAAAAATG GTAAAAGGTG AACTCCTCCA ATAGCATCTC 10620

CAAAATGCTC TTCCAAATTA TCATATAAGT CTTTAAGATT ATTTCCAAGG CTATCAGAAT 10680

AGGTAATCAA CATGGTTTTA TTTTGAATTG GCATCATTAC TCTCCTTTTT CTAATTGAAG 10740

CCAAGTCTCA TATGATCTGG CTTCATAAAT AAAATTCATT TTAAATCTCT ATTTATCATC 10800

AAACTCGTAC TAATATAGAC TGTGATAAAC AAAGTACTAC TTTCTTGTTT TCTGCATAGA 10860

ATTATCAACA AGCTAAACTC TTCCTCTGTG TCAAAGACTA TAGATTCCAT GAGCTCTTCT 10920

TATACTCTTC GAAAATCTCT TCAAACCACG TCAGCTTCAC CTTGCCGTAG GTATGGTTAC 10980

TGACTTCGTC AGTTTCATCC ACAACCTCAA AACAGTGTTT TGAGCAACCT GCGGCTAGCT 11040

TCCTAGTTTG CTCTTTGATT TTCATTGAGT ATTACTTCAC TGCCCCGTTG CTCATTCCTG 11100

AAATGATATG GCGTTGGAAG AAGAGATAGA CAATGGTGAT ACTGATAATG CCGACCACGT 11160

AAGAGGCAAA GCTTGGTCCG TAGTCGTTGA AATATTGGCC TGCGTAGTTG TATTGGAACA 11220

AAGGCAGAGT CCACATTTTG GAATCCCGGT TCAAGACAAG GAGTGGCAAC ATGAAGTCAT 11280

TCCAGAACCA AAGGGCATTG ATGATCATGG TTGTCGCATG CATCGGTTTC ATCATTGGGA 11340

AGATGATGCG GAAATAGGTT GTAAATTGAT TAGCCCCATC GATCTCTGCT GCTTCATCCA 11400

GACTTTCTGG AATCGAGATT TTGATATAGC CAACATAGAG AAAGAGGGTC TGTGGAATCG 11460

CATAGGTCAA GTAGAGCAAG ATCAAACCAA AGGTATTAGC CAAACCGAGT TTACTCATCA 11520

TAACCGTAAT CGGAATCATG ATGACTTGGA AAGGTACGAA GATTCCGAGG ATTAAGAGGG 11580

TATACATGAT GGTAAAGGCT TTTCTTTTAC TCATATTGCG AGCGATGGAG TAGGCTGCCA 11640

TAGGGATAAA GATCATTACT GCAAGTAAAG ACAAGACAGT GATGACGACA GAGTTCCAAT 11700

AATAGCCTCC AATCCCATCA GCTAAGAGAC GGCTAAAGTT GTCCCATGTG AAGTTGGTTG 11760

GAAAGCCAAA GAAATTATCT ACAATATCCT TAGTGGGTTT GAAGGAACTA AAGAGGGTAG 11820

CAAGGAGCGG CACTAAAATC AGAACCGATC CTAGAATCAA TAGAATGTAT TTGCCAATCA 11880

GGGCTTTTCT TTCATCTTGT TTCATCATGC TTCTCCTCTT AAATTTCAAA TTTCTTAGAT 11940

ACTCTCAATT GGATGATCGA AATCACTACA ATTAAGAAGA ACAAGATTAC GGCAATGGCA 12000

TTGGCATAAC CGAATTGGTT GTTTTTAAAG GCATAGTTAT AAACCAAGAG CCCAAGTGAG 12060

GTTGTGGCAT TGTTTGGACC ACCACCGGTC ATGGCAAAGA CTTGGTCAAA GGCAGTCAGC 12120

CCACCTTTTA GGGCTAGGAT AAAGACCATA GAGACACTTG GTAGCAAGTA AGGCAATTCA 12180

ATGTTCCAGA AAACTTGCTT GCTAGTCGCA CCATCAATCC TTGCTGCCTC TGTAATCTCA 12240

GTTGGAATAG ATTGCAAACC AGCTAGGAAG ATGATGATGG GCATAGCCAC CCCTTGCCAA 12300

AGAAGGACAA AGACAGCCGC AAAGATTGCT CCCCACTTAG TCCCTAAAAG ACTGGTTTGG 12360

AAAAATTCAA TATGAAGGGC ATTTCCAATC GCTGGAAGAC CGTAGTTGAA GACTTGCTTG 12420

AAGATCAAAG CCACTGTCAA ACCAGATAAA ACAGCTGGGA AGAAGAACCA AGCACGGAAG 12480

AAGGTTTGGC CTTTGATTTT AGAATTCAAG ACACGCGCAA TGAAGATCCC GAGTGCAATC 12540

TCACCAACCA CCATGGCAAT CGCAATGATT GCGGTAAAGC CAATCGCATT CATGAATTTT 12600

GGATCCATGA AGAGGAGCTT AAAGTTGTTT AAGCCAACAA ATTTGTAGTT ATAAGTCAAT 12660

CCTGTCCAGT TGGTAAAACT GTAAAAGGCT CCTTGAAACA TCGGCACATA GAAGAAAATT 12720

GCTTGTAACA AGAGGGGGAT GACCACAAAA GCCCATGCCC AATATTTTTG TAATACTTTT 12780

TTCATAGTCT CTCTACTCCT AATCCACATC CGCTTTCATC GGGTTAAAGA AGGCATTCAA 12840

ATCATTGACC ATGCCTTGTT TATCACCGGT CAAGACATAG TTCATGGTCA AGGTATGGAA 12900

GTCTGCTTCA CTGGTCCAGT ATTGTTGCAA CCAGACCAAG TGACGATCCG TAAAGGCATA 12960

TTCGGTCATA CCAGCAAGCG GTGAATCTTC TCCTGCTTGT TTGACCCCTT CGATCGCTGT 13020

TGGAGATCCG TCCACATCGT AGTATTTTTG CATGACTTCT GGACGGGTCA TATATTCCAC 13080

AAAGGCATTG GCTTCTTTTG GATGTTTGGT GGTGGCTGAG ATAGACCATG CCAAGTCTCC 13140

CGCACCAACG GTTAAGCTTT GTCCTTTTTC TTTTCCTGGA ATCATGAAGG TCCCAATCTT 13200

AAAGTTCGGT TTTTGTTCAT TAATCGCTGT GATCGCCCAA GACCCATTTG GTGTCATGAG 13260

GACATCCCCA CGTGCGAAGG CTCCGATAAC ATCGGTATAG CCAGCACCTT CCCAGTTCTT 13320

TTGCTTAGAT CCATTGATGC GAAGGATGTC CATGACCTTG ATATCATCTT TCATAATCGG 13380

ATCCGACAAT TTAATGGCAT TTGGTTGAGA ATAACGAAGG TATTGATTTG CTTCTTTTCC 13440

TCCACCTGTT GCTGTCGCAA AGGCTAATTG ATTGTAACCA TTGAGTGTCC AAGCATCTGC 13500

ACCTGCAATT CCAAATGGTG TTTGTCCTTT AGCAACGATA TCTTTGACTA ACTGTTCAAA 13560

TTCATCCCAG GTTTCAGGAA CCTTCAAGCC CAGTTCTTCG AATTTATCTT TGTTGTAGTA 13620

AATTCCATAA GCATTAGCTG TAAAAGGAAC GTTGTAAACT TTTTCGTTTA CAGCATATTT 13680

TTCAGCGTAG CCATTTTTCA CGCGTTTCAG GTAGTCTTTG TTGCTCAAAT CTTCAAAAAC 13740

ACCTGCTTTT GCCCATTCTT GCAGTTCGAT GGACTGTGGG TAAATATTGA CCACATCAGG 13800

CACATCTCCT GCGAGAACGC GTGTCTTCAA TACTTCACCA GCATTTGGTA CATTGACGAC 13860

TTTGACCTTG ATCTTAGGGT TTTCCTTCTC AAAATCACGA GTGATTTCTT CCAAGGTTTT 13920

GGTCATTTCT TTTTTCTGGT TGAAATACTC GATGGTCACT GTGCCATCCG CAGATTTACC 13980

ATAGTTGGAG CAAGCGCCGA GCCCAAACAA AGCTAAACCT GTAGTTGCAA GAAGTCCGAT 14040

TTTTTTATAC CATTCCATTA GAAAGCCTCC TTTATAAATT TATACACCCT TATTGAACTG 14100

CACCCCAAAA GTTAGACAGA ATAAATCTAA CTTTTGGGGT CAGTACATAT CATAGTTTTC 14160

TAAAAATATA CTGTCTACTC AAAAAATCTC CTTGGGATAA GATAACAGTT AAGCCCGCAT 14220

ACATTAGTTC TGCACCTGAG TAAACTTCGC CATTTTCCTG TAATTTATAT AGTCCCTCTT 14280

CATCCAAATC TTTTAATTTT AAAGTTGTTT CCATGGTCTC TACAACAGAT AAAACGCGAA 14340

CGTAGGTTAC AATCGTTTGA TTTCCGTAAT TAAATTGTAC AGCTGCTTCA TTGGATACAG 14400

TATCAGGATT AATTAGTCTA TACTGCTGTC CTAACTGAAC TACTGGTCGT AATTCTTTAT 14460

ACAAGTTCAC CTGATTAGCA ATCGTAGCTT TCTCTTCATC TGATAAATTT GTCAAATCAA 14520

GTTCATAGCC CAAATTTCCC ATCATTGCTA CAAGGCCACG TGTTTCTAAT GGTGTCATTC 14580

GTCCCATCTG ATGATTCGGT ACTGCTGACA CATGAGCCCC CATAGAAATG GTTGGATAGA 14640

GATAGGATGA ACCGTATTGA ATTGGTAAAC GTGCAATGGC ATCAGTATTA TCACTAGCCC 14700

AGACTTGTGG GAAATAGCGC ATCATACCAA GATCATTTCG TCCACCACCA CCAGAGCAGG 14760

ACTCAAAGAG AATATGGCTG TGCTTCTCTG TCAGATAAGA AACGAGTTCA TAAAGCCCCA 14820

GCATGTACTG ATGAGATTGC ATCTGTGTCT CTAGATAAGT TAATCCATTC CCTAGCTTAG 14880

TGATATTGCG GTTCATATCC CATTTAATGT AATCAATATC ATGATAAAAT AGGAGTTGAT 14940

CTAAGACACT TTTCAAGTAT TCTACTACCT GAGGATTGGC AAGATTAAGT ACTAATTGAT 15000

TCCGAGAATA AGTATGCTCA TAGCCAGGAA CCTGAATAGC CCAGTCAGGA TGTTGACGAT 15060

ACAAATCACT ATCTACAGAA ATCATTTCGG GTTCTAACCA AAGTCCAAAC TGCAAACCTC 15120

TTTCATGGAT AGCTGAAATC AGACTTTCTA GACTTCCACC CAGTTTTTCC TCATTAACAA 15180

CCCAATCACC TAAAGCACGA TTATCATCAA AACGATTGCC AAACCAACCA TCATCTAATA 15240

CAAAAAGTTC AATGCCAACT TTCTTAGCTT CATCTGCTAA CTCTAACAGT TTTTCTCTCT 15300

GAAAGTCAAA GTAAGTAGCT TCCCAGTTAT TGATTAGAAT TGGACGTTCT TTTTTAGAAA 15360

ATTCACTTAG CATAATGTGC TTCAGTACAA AATTCTGACT TTCATGACTA ATACCAGTTA 15420

ATCCCTGATC TGAATGAGTC ACTAAAGCTA CCGGTGTTTC AAAGTATTCC TCAGGAGCTA 15480

ACTTCCAAGA AAAGTTTTCT GGATTAATGC CAATAGCCAC CCGAACTTCA TTCAATTGAT 15540

TTTTTTGAAC AAAAGCTTCA AAGTTGCCAC TATACATTAG TTGAATAGCA AACACATTCC 15600

CAGCATCCTC TGTGACTCCT TGTTCGCATA GTAGAAGAGC TGGTGTTTGA GCATGACCAG 15660

AAGCACCTCG GTTTGAACTA ATCGAAAAGA TTCCTTGTTC TACCTGTTGA CGTCTAACAG 15720

TCTTTTCACG AGCATAAGCA CCCTGCAGAG TTACTATTTC GTAATCTGCA GCTGGAAAAT 15780

CAGCCATAAA AGAAAAATCT TTATGGATGA CAACTTCCTG ATTACTATTA TTATCTAATT 15840

TACTGTAGCT AGCAATAGTC GCATCATTAT TAAAAGTAGT ATAATACAAA GTCAGACTAA 15900

GTTGAGCCTT AGAATCTTCT AACATTAAGA CAAGAGTCTC TGTATCGTCC ATGCTATGTG 15960

GAGAAGGTAA GCCCTGTGGA CCATTCTGAC CTTTTAAAAT CTTTGCTTCT ACAAATCGAA 16020

AGTCTGTTAC TTCAGTTACA CTATGCTGAA CCTGTATGGT TGGTTTCCTA AAATCTCCTA 16080

AGCCATGTTG TCCAAAAATC TGTCGCTGAG TATCTAAACT AAAGGTTCGA TTAGTAGCCG 16140

TTGGATTTCC TGAAAAGGCA TGGTCTCGTT CATAAACACT ATTGGAACCT TTATAGTTCT 16200

TAATAGTCTT TCCTAAATGT TTCAAAAGTA AGTAGCCATT TCGATTTTCA ATAATCAAAC 16260

TTAGATTTTT ACTCTCAACA TAAAATAGAT TATTCTCTAT CCTAACTCCC ATTTACTTCA 16320

CCTCATCACT TTATTGATTA TATTTTATCA CCTGAAATCG CTTTCCAAAA TAGAAAAATG 16380

TCTCAAGAAT ATGGTAAAAT GTTAGGTAGG AGGTAGCACA TGTTAGTTTT TTCAGAATAC 16440

CAGACTGGAA CAATCGACCT TGCCCTAAGC TTTTATGGAT ATGAGGAATG CACACCTAAT 16500

TACTCTTTTG GTCCAGCCAT TCGTGATACA TACGTTCTAC ATTACATTAC TAAAGGACAA 16560

GGAAAATTTC ATTACAAGGG TAAAATTGTT GATTTAAAAG AAGGAGATTT CTTTCTATTA 16620

AAACCAGAGG AACTAACCTT TTATCAAGCA GATAGTAAAG AACCTTGGGC CTACTACTGG 16680

TTAGGAATCA CTGGAGGGAA AGCCCCTGAT TATTTTGCTC TTTCCCAAAT TTCTGATCAA 16740

TCCTATCTCA TCCAATCTGA AACTTGTCAT ACCCAGACTA CTGCAAAACT CATCTCAGAC 16800

ATTGTCCGCT TCGCTCAGAT TACAAAATCA AGTGAATTAG CTCAACTCCA TATCATGGGA 16860

CAACTTCATG AACTGATGTT TCATCTGGGA ACTATTGCTC CCAATCAGAA AAAAAAGAAT 16920

ATTTCATCAA CCCACCAACT CTATCTTGAA TGCAAACGAT TAATTGATAG CCACTATCCT 16980

CAATCACTTA CAATTCAAGA TTTAGCAAAA GAACTATCCG TTCACAGAAG CTACTTATCA 17040

AGCGTATTCA AAGAATTTAA TACCTTATCA CCCAAAGAAT ACCTACTCTA CGTTCGAATG 17100

CACCGAGCTA GACAACTTCT CGAAAATACC CAAGAGTCCA TCAAGGTAAT TGCATACTCG 17160

GTAGGTTTTT CAGATCCACT CCATTTTTCG AAAGCTTATA AACAATACTT TAATCAGACT 17220

CCAAGTCATA CAAGAAAAGA ATACTCTCAA TACCAACTAG TAAGAAAGGC AACATTATGA 17280

AATCCTACCA AGCTGTCTAC CAAATCCTAT CTAAAGAAAC CGACTATATC AGCGGAGAAA 17340

AAATCGCAGA AAAACTATCC CTAAGCCGAA CAGCAATTTG GAAAGCCATC AAGCGACTAG 17400

AACAAGAAGG CATTGAAATT GATAGTATCA AAAATAGAGG ATATAAACTG ATGAATGGTG 17460

ACCTTATTCT TCCAGAGATT CTAGAAGAAA ATCTTCCAAT TAAAGTCAGC TTTAAACCCG 17520

AAACAAAATC AACACAACTA GATGCAAAAG AAGCAATTGA TTTAGGCCAT GAAGCAAATA 17580

CCCTCTATCT AGCTTCCTAT CAAACAGCAG GCCGAGGCCG TTTTCAACGT TCCTTCTACT 17640

CACCACAAGG TGGTATTTAT ATGACACTCC ATCTTAAACC AAATCTCCCC TATGACAAAT 17700

TACCATCCTA CACACTACTT GTAGCTGGAG CTGTCTACAA AGCCATTAAG AACCTAACTT 17760

TAATAGATGT CGACATAAAA TGGGTCAATG ATATCTATCT AAACAATCAT AAAATTGGAG 17820

GAATCCTTAC TGAAGCAATG ACCTCTGTAG AAACTGGCTT AGTCACAGAT ATCATTATTG 17880

GAGTAGGTAT CAATTTCACT ATTAAAGACT TCCCTCAGGA ATTAAAAGAA AAAGCTGCCA 17940

GCTTATTTAA AGCTACAGCT CCTATAACAA GGAATGAATT GATCATAGAA ATCTGGCGTG 18000

CTTTCTTCGA AACACCAGCA GAAGAGCTAT TATACCTATA CAAAAAACAG TCATTCATTC 18060

TAGGAAAAGA AGTCACTTTC ACACTAGAGC AAAAAGACTA CAAGGGACTT GCTAAAGACA 18120

TCTCAGAAAA TGGAAAACTT TTAGTTCAAT GTGATAACGG AAAAGAAATC TGGCTAAATA 18180

GTGGCGAAAT TTCTCTCAAT AGTTGGAAGT AAAATAACAC AATTATAATA TAAACGATAT 18240

AAAAATAACT TCAGATTAGT AATTCAATTA AGTTTTACGG ATCTGAAGTT TTATTGGCTC 18300

TAAAAATAAA AAAGAGAGTT ACAGACTCTC ATTAAAACGG AGAATAAGGG ATTCGAACCC 18360

TTGCGCCAGT TACCCGACCT AACGATTTAG CAAACCGTCC TCTTCAGCCT CTTGAGTAAT 18420

TCTCCAATTA ATGGGCACGA GTGGACTCGA ACCACCGACC TCACGCTTAT CAGGCGTGCG 18480

CTCTAACCAC CTGAGCTACG CGCCCAAGTT AAAAAACTTG GTAATTTGAA CAAAGTTCAA 18540

AGCGGGTGAC GAGAATCGAA CTCGCGACAA CAGCTTGGAA GGCTGTAGTT TTACCACTAA 18600

ACTACACCCG CATAAATACT ATCAATAAAA TGGCGCGAGA CGGAATCGAA CCGCCGACAC 18660

ATGGAGCTTC AATCCATTGC TCTACCAACT GAGCTACCGA GCCTTATTGC GGGAGCAGGA 18720

TTTGAACCTA CGACCTTCGG GTTATGAGCC CGACGAGCTA CCGAGCTGCT CCATCCCGCG 18780

TTAATAATAT AAAAGGAGGA TGTGGGATTC GAACCCACGC ACGCTTTTAC ACGCCTGACG 18840

GTTTTCAAGA CCGTTCCCTT CAGCCGGACT TGGGTAATCC TCCAATATTC AAATGGACCT 18900

TGTAGGACTT GAACCTACGA CCACTCGGTT ATGAGCCGAG AGCTCTAACC AGCTGAGCTA 18960

AAGGTCCGAC AAGATCATTA TAGCGGCGAA GGGGATCGAA CCCCCGACCT CCCGGGTATG 19020

AACCGGACGC TCTAGCCAGC TGAGCTACAC CGCCATGAAT CGGGAAGACA GGATTCGAAC 19080

CTGCGACACC TTGGTCCCAA ACCAAGTACT CTACCAAGCT GAGCTACTTC CCGAGTTAAA 19140

TAGAAAAATG CACCCTAGAG GAGTCGAACC TCTAACCGCC TGATTCGTAG TCAGGTACTC 19200

TATCCAGTTG AGCTAAGGGT GCTCCATATT ATGCCGAGGA CCGGAATCGA ACCGGTACGA 19260

TCGTTACCAA TCGCAGGATT TTAAGTCCTG TGCGTCTGCC AGTTCCGCCA CCCCGGCCTC 19320

TCTAAGCGAA CGACGGGATT CGAACCCGCG ACCCCCACCT TGGCAAGGTG GTGTTCTACC 19380

ACTGAACTAC GTTCGCACTG TTTTCTTCTA TCTAAAAATG CCGGCTACAT GACTTGAACA 19440

CGCGACCCTC TGATTACAAA TCAGATGCTC TACCAACTGA GCTAAGCCGG CTCATTTGTT 19500

ATATCTTAAT GCGGGTTAAG GGACTTGAAC CCCCACGCCG TTAAGCGCCA GATCCTAAAT 19560

CTGGTGCGTC TGCCAATTCC GCCAAACCCG CATATATGAC CCGTACTGGG CTCGAACCAG 19620

TGACCCATTG ATTAAAAGTC AATTGCTCTA CCAACTGAGC TAACGAGTCT AAAATAACTT 19680

GCGTTACCTT AAACGGTCCG ACGGAATCGA CCCGGTAC 19718

(2) INFORMATION FOR SEQ ID NO: 100:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 4117 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 100:

CCGTGGAAAA GTCTGGATAG TGAATGGTCT TCACACAATG ACCTGAAAGA AGCCTGAGAA 60

TAATTATGGA GAGTAGCATT CTGAGAGGTG TTAGCAGAAC CATATGACAG AGCTGTTTGA 120

AGAGGGAATA TTGAGGAGAA AAATCCTGAG CCTACCAGTT GGAGTTGGAA AGAGCTGACT 180

GTTAGATCAT GGTTTATTAT CCACAACCTG TGGATAACTT TGTGAATAAG AGAAGTTGCT 240

AAAGAAGGAG ATATATAACG ATGAAGAAAA TCAAACCGCA TGGACCGTTA CCAAGTCAGA 300

CTCAGCTAGC TTATCTGGGA GATGAACTAG CAGCTTTTAT CCACTTCGGT CCTAATACCT 360

TTTATGACCA AGAATGGGGG ACTGGACAGG AGGATCCTGA GCGCTTTAAC CCGAGTCAGT 420

TGGATGCGCG TGAGTGGGTT CGTGTGCTCA AGGAAACGGG CTTCAAAAAG TTGATTTTGG 480

TGGTCAAGCA CCACGATGGC TTTGTCCTTT ATCCGACAGC TCACACAGAT TATTCGGTTA 540

AGGTCAGTCC TTGGAGGAGA GGAAAGGGCG ACTTGCTCCT TGAAGTATCC CAAGCTGCCA 600

CAGAGTTTGA TATGGATATG GGGGTCTACC TGTCACCGTG GGATGCCCAT AGTCCCCTCT 660

ATCATGTGGA CCGAGAAGCG GACTACAATG CCTATTATCT GGCTCAGTTG AAGGAAATCT 720

TATCAAATCC TAACTATGGG AATGCTGGTA AGTTCGCTGA GGTTTGGATG GATGGTGCCA 780

GAGGAGAGGG CGCGCAAAAG GTTAATTATG AATTTGAAAA ATGGTTTGAA ACCATTCGTG 840

ACCTGCAGGG CGATTGCTTG ATTTTTTCAA CAGAAGGCAC CAGTATCCGC TGGATTGGCA 900

ATGAACGAGG GTATGCAGGT GATCCACTGT GGCAAAAGGT GAATCCTGAT AAACTAGGAA 960

CAGAAGCAGA GCTGAACTAT CTTCAGCACG GGGATCCCTC GGGCACGATT TTTTCAATCG 1020

GAGAGGCAGA TGTTTCCATC CGTCCAGGCT GGTTCTACCA TGAGGATCAG GATCCTAAGT 1080

CTCTCGAGGA GTTGGTCGAA ATCTACTTTC ACTCAGTAGG GCGAGGAACT CCACTCTTGC 1140

TTAATATTCC GCCGAATCAA GCTGGGCTCT TTGATGCAAA GGATATTGAA CGACTTTATG 1200

AATTTGCGAC CTATCGCAAT GAGCTCTATA AAGAAGATTT GGCTCTGGGA GCTGAGGTAT 1260

CTGGTCCAGC TCTTTCCGCA GACTTTGCTT GTCGCCATTT GACAGACGGC CTTGAGACCA 1320

GCTCTTGGGC AAGCGATGCA GACTTGCCCA TCCAGTTAGA ACTCGACTTA GGTTCTCCTA 1380

AAACTTTTGA TGTAATTGAG TTAAGAGAAG ATTTGAAGCT AGGGCAACGA ATCGCTGCTT 1440

TTCATGTGCA AGTAGAGGTG GATGGTGTCT GGCAGGAGTT TGGTTCGGGT CATACTGTTG 1500

GTTACAAACG TCTCTTACGA GGAGCAGTTG TTGAGGCACA GAAGATACGT GTAGTCATTA 1560

CAGAATCACA GGCTTTGCCT TTGTTGACCA AGATTTCCCT TTATAAAACT CCTGGATTAT 1620

CAAAAAAAGA AGTTGTTCAG GAACTAGCAT TTGCAGAAAA AAGCCTAGCT GTGGCAAAGG 1680

GAGAAAATGC CTATTTTACA GTTAAGCGCA GAGAATGTAG TGGTCCTTTA GAAGCTAAGA 1740

TTTCGATTCA ACCGGGGACA GGTGTCCATG GTGTCGCCTA TCAGGATGAG ATTCAAGTCC 1800

TTGCGTTTCA AACTGGTGAG ACTGAAAAAA GTCTGACGCT ACCAACCTTG TATTTCGCAG 1860

GAGATAAAAC CTTGGATTTC TATCTGAACC TAACGGTGGA TGGTCAGCTT GTGGATCAAC 1920

TTCAAGTCCA AGTTTCATAA AAGAAGAACC TTTGCGCGAT GCAAAGGTTC TTTTGGTTAT 1980

TAGTGACTTG GTAACCAGCT GAGGGTGAAA GTTAGTTGTT CAGCTTTTAA GAGGTCTTGG 2040

TGTTGAATAG TTGATACGAG TGTTTTGTCC AGTCGGCATT CTTTGACAAA GTTAAAATGG 2100

TTGTGGTTTT GTTTAGTATG GATATCCAGC CATTTATCTT CTTTAGCGAG GTAGACTCGT 2160

AGATGGTCAA AGAGAGGGAT TCCGAGGTCA TAGCTTGGTT TTCCTGGACA GGTTGGATAA 2220

AATCCGAGAG CTGACCAGAT GTACCAAGCA GAGAGACTAC CATTGTCTTC ATCTCCAGGA 2280

TAGGCTTCCC AACTTGGGTG AAAAGCTTTC TGACGGAGCG TCTTGATAAG AAGGGCAGTG 2340

TAGTCAGGGT AATCGCTGTA ACGGAAGAGA TAAGGAATGT GGAAACTAGG CTGGTTGGAA 2400

ATGGCTATTT GTCCAAAAGG AGCAGTAGCC ATCTCGCTCA TTTCGTGAAT TTCGTAACCA 2460

TAGCCTGTTG TTTCAAAGAG GGGAGCATCT TGACAGGCTT TCAAAAGATA GTTGCTAAAG 2520

GTTTCTTTTC CACCCATCAG TTGGATTAAG CCAGGGATGT CGTGGAGAAC GCCTAAAGTA 2580

GCTTGAATGG CAGAGCATTC AGCGTAGTCT CGCCCCCAAC TATAAGGAGA GAAGTCAGGG 2640

TGAAAGTTTC CTTGATTGTC TCGTGCTCGC ATGTAACCTG TCTCAGCGTC AAATAGCTGG 2700

CGGTAATTTT GTGAAGCAGC CTTGTAGGTT TCAGCGATTT CTATGTTCTC TAGTTTTTTG 2760

GCACAGCTGG CGATACAAAA GTCACTATAG GCATAGTCTA GAGTATGGCT AACACTTTCG 2820

TGGTGGTCGG TAGAGAGGTA ACCTAGTTCT TGGTATTGGG CTAGTCCGTG GCGGCCATTG 2880

ATGCCGAGAG GGTCGGCTTT GCTGGCTGTT TCGAGCATGG CTTGGAAGAG TTCTCCTTCT 2940

AGGTCGGGGG TCATGTCCTT GCAGGCGCTA TCTGCGATAA TACCGTCTAA AAGTGTACCT 3000

GGCATCATAC CCCGTTCATC TGGAGCCAGC CATTTTGGAA GGAAACCAGT ATCGCGGTAG 3060

CTATTGAGGA AACCTTCTAA AAAGCGTTGA TAGTGCTCCG GTATGATAAG GGCAAAGAGG 3120

GGGAAGGTGG TGCGGAAGGT ATCCCAGAAA CCATTGTTGC TAAAGAGGAC ACCAGGCTTG 3180

ACAGTACCAG TAGCCAGATC CATGTGGATG GCTTGCCCTG ATTCATTAAT CTCATAAAAA 3240

GTCTGTGGGA AGAGGAAGAG TCTGTAGAGG CAGTGGTCAA AGAAGGTTCG GTCAGCCTCT 3300

CCTGTCTCTA TAATGTCAAA ACGATGGAGG AGATTTTCCC AATCCACTTG GGCACTTGAT 3360

TTACAGCTAT CAAAATCTTC TTGAGGTAGA TTGATTAGAG CTTGAGAAGG AGAGATGAAA 3420

GAAGTGGCTA GTTGCATCTC GGTTTGACTA CTTGCTAAGT CAATTCGCCA GTCTCCAGCT 3480

TCTTGGCTGA TAGCAAGAAT ATCCGTGTTC ATTTGCAGGG CAGTGAACAT CGTTAGCGAA 3540

TTTTTGTTAG TTTCAGTTTT ACCTTCTTGT CGCAGGGCAA GAGTCCGCTT ATCTACTTGC 3600

TCTACTGTCA GTTCATCTGC TGCGTGAAGA TAGAGGGAGA GGGCTTTGCC TTGCTTTTGA 3660

TTCAAACGAA TAGAAGCACC ATAGCAAGTC GGTGTGAGCT GGGTTTCAAT CTGATAACGC 3720

AGAGAAAAGA GCTTCAAATA GTGAGGCTGG AAGCAAGCTT TATCTATATC ATAAGAAGAC 3780

TGGCGGTGAA AGAGGCTGTC TCCCCCCAGT TGACTGGTGA CAGGTGTCAG AAGGAGCCAA 3840

GAGTAGTCCC CAATCCAAGG ACTGGGCTGG TGAGTTAATC GAATCCCCTG AAAGATAGGC 3900

AGATGTGGAT CAAAAAACCA AGATCCATCC TGGTCACTGG TCTGGGGCAC AAAGTAATTC 3960

ATCCCAAAAG GCACGCCTGT GTATGGCAGG GTATTTCCCC GAGAAAAGGC ATGCTTGTTG 4020

GTAGTTCCAA AACGGGTATC GATGGTATCA AGTAGTGGTT TCATAGTCTT TCCTTTAGCT 4080

GTTTTTCTAC ATTATATCAG TAATAGAGGG CCTTTAG 4117

(2) INFORMATION FOR SEQ ID NO: 101:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 2727 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 101:

CTGGTTCAAT TATTATTCAC TCTAAGTAGT CATATGTTCT TTATTTATGT GAGTTTTTAC 60

CTTTTAAAGG ATCTTGTTAG ATGGGAGAAG GTTTTAAAAG TGACAGATGA TAATACAAGA 120

AAAGTTCGTT TATTAGTAGC CTTTTTTAGC ATTGTCATAG GCTACATCCT GAGTTCTTTC 180

TTTATTAGCC TGTATCATTT GTGGCAAGAA GCGCTTAGAG GATTATTATG AAATCAAGAG 240

TAAAGGAAAC GAGTATGGAT AAAATTGTGG TTCAAGGTGG CGATAATCGT CTGGTAGGAA 300

GCGTGACGAT CGAGGGAGCA AAAAATGCAG TCTTACCCTT GTTGGCAGCG ACTATTCTAG 360

CAAGTGAAGG AAAGACCGTC TTGCAGAATG TTCCGATTTT GTCGGATGTC TTTATTATGA 420

ATCAGGTAGT TGGTGGTTTG AATGCCAAGG TTGACTTTGA TGAGGAAGCT CATCTTGTCA 480

AGGTGGATGC TACTGGCGAC ATCACTGAGG AAGCCCCTTA CAAGTATGTC AGCAAGATGC 540

GCGCCTCCAT CGTTGTATTA GGGCCAATCC TTGCCCGTGT GGGTCATGCC AAGGTATCCA 600

TGCCAGGTGG TTGTACGATT GGTAGCCGTC CTATTGATCT TCATTTGAAA GGTCTGGAAG 660

CTATGGGGGT TAAGATTAGT CAGACAGCTG GTTACATCGA AGCCAAGGCA GAACGCTTGC 720

ATGGTGCTCA TATCTATATG GACTTTCCAA GTGTTGGTGC AACGCAGAAC TTGATGATGG 780

CAGCGACTCT GGCTGATGGG GTGACAGTGA TTGAGAATGC TGCGCGTGAG CCTGAGATTG 840

TTGACTTAGC CATTCTCCTT AATGAAATGG GAGCCAAGGT CAAAGGTGCT GGTACAGAGA 900

CTATAACCAT TACTGGTGTT GAGAAACTTC ATGGTACGAC TCACAATGTA GTCCAAGACC 960

GTATCGAAGC AGGAACCTTT ATGGTAGCTG CTGCCATGAC TGGTGGTGAT GTCTTGATTC 1020

GAGACGCTGT CTGGGAGCAC AACCGTCCCT TGATTGCCAA GTTACTTGAA ATGGGTGTTG 1080

AAGTAATTGA AGAAGACGAA GGAATTCGTG TTCGTTCTCA ACTAGAAAAT CTAAAAGCTG 1140

TTCATGTGAA AACCTTGCCC CACCCAGGAT TTCCAACAGA TATGCAGGCT CAATTTACAG 1200

CCTTGATGAC AGTTGCAAAA GGCGAATCAA CCATGGTGGA GACAGTTTTC GAAAATCGTT 1260

TCCAACACCT AGAAGAGATG CGCCGCATGG GCTTGCATTC TGAGATTATC CGTGATACAG 1320

CTCGTATTGT TGGTGGACAG CCTTTGCAGG GAGCAGAAGT TCTTTCAACT GACCTTCGTG 1380

CCAGTGCGGC CTTGATTTTG ACAGGTTTGG TAGCACAGGG AGAAACTGTG GTCGGTAAAT 1440

TGGTTCACTT GGATAGAGGT TACTACGGTT TCCATGAGAA GTTGGCGCAG CTAGGTGCTA 1500

AGATTCAGCG GATTGAGGCA AGTGATGAAG ATGAATAAGA AATCAAGCTA CGTAGTCAAG 1560

CGTTTACTTT TAGTCATCAT AGTACTGATT TTAGGTACTC TGGCTCTAGG AATCGGTTTA 1620

ATGGTAGGTT ATGGAATCTT GGGCAAGGGT CAAGATCCAT GGGCTATCCT GTCTCCAGCA 1680

AAATGGCAGG AATTGATTCA TAAATTTACA GGAAATTAGG CTGGAGAACC AGCCTTTTTC 1740

TAAAGATAAG GAGAAATATG AACAAAAAAA CAAGACAGAC ACTAATCGGA CTGCTAGTGT 1800

TATTGCTTTT GTCTACAGGG AGCTATTATA TCAAGCAGAT GCCGTCGGCA CCTAATAGTC 1860

CCAAAACCAA TCTTAGTCAG AAAAAACAAG CGTCTGAAGC TCCTAGTCAA GCATTGGCAG 1920

AGAGTGTCTT AACAGACGCA GTCAAGAGTC AAATAAAGGG GAGTCTGGAG TGGAATGGCT 1980

CAGGTGCTTT TATCGTCAAT GGTAATAAAA CAAATCTAGA TGCCAAGGTT TCAAGTAAGC 2040

CCTACGCTGA CAATAAAACA AAGACAGTGG GCAAGGAAAC TGTTCCAACC GTAGCTAATG 2100

CCCTCTTGTC TAAGGCCACT CGTCAGTACA AGAATCGTAA AGAAACTGGG AATGGTTCAA 2160

CTTCTTGGAC TCCTCCAGGT TGGCATCAGG TCAAGAATCT AAAGGGCTCT TATACCCATG 2220

CAGTCGATAG AGGTCATTTG TTAGGCTATG CCTTAATCGG TGGTTTGGAT GGTTTTGATG 2280

CCTCAACAAG CAATCCTAAA AACATTGCTG TTCAGACAGC CTGGGCAAAT CAGGCACAAG 2340

CCGAGTATTC GACTGGTCAA AACTACTATG AAAGCAAGGT GCGTAAAGCC TTGGACCAAA 2400

ACAAGCGTGT CCGTTACCGT GTAACCCTTT ACTACGCTTC AAACGAGGAT TTAGTTCCCT 2460

CAGCTTCACA GATTGAAGCC AAGTCTTCGG ATGGAGAATT GGAATTCAAT GTTCTAGTTC 2520

CCAATGTTCA AAAGGGACTT CAACTGGATT ACCGAACTGG AGAAGTAACT GTAACTCAGT 2580

AAAAGATACG CCTACACTCC TATGTCACTT ATGGATGTAG GAGTTCTTTT TACTAGTTTA 2640

AGCAGGACTA AGACAGGTAC TAAGACAAAA TAGCAACTTC TAAAACTAAC TTCCAGTTTT 2700

GGGAGAGAGA TGGAAGTTAC TTTGAGA 2727

(2) INFORMATION FOR SEQ ID NO: 102:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 5717 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 102:

TTTTTTGTAG ATTTAAGTGG GGTGCAATTC CTAAAAAATA AAAAACAATT TTTGAAAATT 60

ATGTTAGCAG GAATTGCTTC AAATTCGATT TTATCACTTA CAGGTTTACT TGTTTTATTG 120

TTCACATCGT ATAAATTGCT TGGACTCTTA TTTTTTATCA TTAACTTAGG TATGATTTTT 180

ATTAATTCAA TTCCTTTTTT TCAGTATGAT AGTGGTATTA TTTTAAGATA CTTGAATTCT 240

AACAATAATA ACTTGAATTT TCAATATATA GTTCAACTTT TAATAGCATT TGTTATTATT 300

TATTTTCCTT TGAGTCAACT ATTACAGTTT TTGACACCCA ATATTATTGT TCGTAGTATA 360

GGAGGGGTGG TTGTTTCTAT ACTGCTTTCT ATATTATATA TGATAGGAAG GACGAAATAT 420

GTTCTACGTA AATAGTTATG TTTTTGCTTA TAAAAAAGAA GGTATAATGT ATTTACGTGG 480

TCGGAGTATG CGGGAAATAG CTATAGAACC TCAAATTTCG CAAGAATTTA TCAACGATCT 540

ATTTAATAGT TGTAAGGAAC TATTAGAGAT AGAAGAAGTA TTAGGCAGTA AACTAACATT 600

TGAACTATAA ATGAACAAAT TTTAATTTCG GATGAGATAG ATATTGATAG TAGATATTCT 660

AGAACTAAAG GTTACTATTC GTTATTTTAT AATGAAGAGT ATAATAAAAT ACAGAATAAA 720

ACAGTATTAG TATTAGGAGC AGGAGTCTTA GGATGTTATA TATCTCTAAG TCTAAGTATG 780

TATGGAGTGA GGAAACTTAT TGTCGCTGAT TACGATATAA TAGAACCATC AAATTTAAAT 840

AGGCAAATTC TTTATACAGA GTCGGATGTT GGTAAGGAGA AGATTAATGT TCTTTCTGAA 900

AAAATACACA AGTATAATTC AGATGTTCAG GTAGTACCTA TTTCTATTAA AGTTTCTTCA 960

GTAGAAGAAT TAGAAAAAAT TGTTGCGGAA TATGGGAGTA TAGATTTTAT CGTTAAAGCA 1020

ATTGATACGC CCATTGATAT TATAAAAATT GTCAATCAAT TTGCTGTATC GCATAAGATA 1080

TCCTACATAT CAGGAGGGTT TAATGGATGC TATCTTATTA TTGATAATAT ATATATCCCT 1140

ACCATCGGTT CTTGCTTTGG TTGTCGGAAT ATAAACAAAG ATATAAATAA GTACACTTTA 1200

TCTGATAAGA CAAAGTGGCC GACTACACCA GAGATGCCTG CTATTTTGGG AGGGATAATG 1260

ACTAATTTAA TAATTAAAAT ATTTCTGGGA TGTTATAATG AAATCCTAAT AGATAACGCT 1320

TACGTTTATA ATATGAGAAA TCATGCTCTA AGTCAAGAAA AATATGTTCT GGAAAACGGA 1380

GAATGTCCAA TTTGTAAAAA AATAATAAAG TGAAAGATAA CAATATTAGA GCGAAAACAT 1440

TTATTCGTTC AGTTTGTTTT TGCTTATTAT CAGGAGGAGT AGCTTTTTTA TCTGCTATTG 1500

GGCAGTTCAC TGTTATAGAA ACACAATTAA TAGTATTGTT CTTGGGTATT ATTTTTGCTA 1560

TATATTATGC TTACTACAAT AAAAATATTC AAACATCATT GGAAAATATA GTATGGCTTT 1620

TTTCATCGTT TGAGATTTTA TTTTTGCTTG TTAATTTTAG AACATTTATT CAGTTACCAG 1680

TGGATATTTT TATTGGTATG ATAATATTTT TAATGCTGTG GATATTTATT ATGTTAGGTA 1740

TAGTGTGTCT TAGTTATTAT ATAACTTTAT TATTTAGCAA GGAGGCTTAG TATGTTTAAA 1800

AAAATAGGTA TAATGAGCAT TTGCATATAT ATAATTATTT TATACTGCTT GAGAATGTAT 1860

CGTATTATCA ATAATATTGA AACAATCTTG CTAACGGTTA TATGCTTAAT GTTATTGTTT 1920

TTTTTAAGAC GTTTATTTGA TAAAGATAAG TAAATAGATG TTAAGTAAAA ATGTAGAATA 1980

TAAAGGAGGT GCAATGAGTA TGATTGAAGT TAGCCATTTA TCAAAAAGTT TTGGTGATAA 2040

AATAGCTTTA AATAATATAA GCTTCACTGT TAAAGAAGGT TAGATTTTTG GATTTTTAGA 2100

ACCATCTGGT TCTGGAAAGA CCACAACGAT TAATATTCTG ACTGGGCAGT TCCTTGCCGA 2160

TAAAGGACAA TCTATTATTT TGGGACAAAA ATCTCAAAAT TTAACAAGCG GTGAATTAAA 2220

GAGAATTGGA TTGGTTAGCG ATACAAGTGG ATTTTATGAG AAAATGTCTC TGTATAACAA 2280

TCTTCTTTTT TATAGTAAAT TTTATAATAT TAGTAAATCA CGTGTTGATA ATTTGTTAAA 2340

GCGAGTAGGA TTATATGATA GTCGCAAGAT GGTAGCAGGA AAATTATCCA CTGGAATGAG 2400

GCAACGAATG CTTTTAGCAC GAGCTCTTAT CAACAACCCC GCTGTACTCT TTCTGGATGA 2460

ACCGACCTCA GGTCTAGATC CCACAACTTC TCGAACAATT CATGAGTTAA TTTTAGAATT 2520

GAAAACAGCA GGGACAACGA TTTTTCTAAC GACTCATGAT ATGAATGAAG CAACTCTTTT 2580

ATGTGATTAT GTTGCCTTAT TAAATAAAGG GAAATTAGTT GAGCAAGGAG CTCCTTCTGA 2640

ACTCATTCAA AGATATAATA AAGATAAAAA GATTAAGGTT ACAGATTATA ATGGGAATCA 2700

GATAACTTTT GATTTTACAT CACTAGAACA GGTATCTCAG ACTGATCTGG AAAATATTTT 2760

TTCAATTCAT TCATGTGAGC CTACTTTAGA AGATATTTTT ATCACATTAA CAGGAGGAAA 2820

GCTAAATGCT TAAACGGTTT CTGGCTTTGG TATGGTTGCG TTGTCAAATC ATCCTTTCCA 2880

ATAAGAGTAT TTTATTGCAA GTTTTAGTGC CTTTTGCTTT CACATATTTT TATAAATATC 2940

TTATGGAAAC ACAGGGGAAG GTCAACGATC AACAGGCATT AGTTCTTTTG ATGATGTGTT 3000

TACCTTTTTC TTTTTCTTTG GCTGTTGGAA GTCCTATAAC TATTATCTTG TCTGAAGAAA 3060

AAGAAAAGTA CAATTTACAA ACTCTTCTGT TGAGTGGTGT TAAAGGCTCC GAATACATTT 3120

TATCAACTAT GTTTCTTCCT TTTTTGCTAA CTTTTGTGAT TATGGGAACT ACTCCTCTTA 3180

TTTTAGGAGT TACAATTGTA CATACTTTTA ATTATATTAC AATCGTTCTT CTAACCTCTT 3240

TATCCATCAT TTTATTCTAT TTATTGATAG GTTTAACCGC GAAGAGCCAA GTAGTAGCTC 3300

AGGTTATCAG TCTTCCTGCT ATGATTTTAG TTGCTTTCTT ACCGATGCTA TCTGGTTTGG 3360

ATAAGACAGT TGCGAAGATA ACAGATTATA GTTTTATGGG ACTATTTACT AAGTTTTTCA 3420

CAAAATGGGA GGAATTTTCA TGGAATAAAA CTCTAATTCC TAATCTAACA CTACTTATTT 3480

GGATTGTTCT TCTATTAACT TTAATTACGA TAACTATTAG GAAAAAGAAA ATTTCTTAAT 3540

TGAGTTATTT TAATGATTAT AAACACAAGT GGGAAGGAAA AAATGAACTG ATCTTTTTGA 3600

CAGCAATTCT ACAGAATAGT CTTATTGCTA TATTTTGATT TGAGTGTACG AAAAAAGAAA 3660

AATAACAATA GTGCTCATAC TAATTGCAGA AGTTTTGGGT GATAAGATAA CTGATAAATT 3720

GCAATAAAAA ATGCAACATT TTTAAATCTC CTCTATAAGT GCTTCAAAAA GTGCTTCAAA 3780

ACCTGTCTTG TAATCCAAGT ATTTTTGGGG ACGGTGATTA ATAAGCTAGC AAAGCATCAT 3840

TAAGGATTTT TTCGGTAATT GTTGCCAAAT CGGTTTAAGA AAATACTCAC GAAGAAGTCC 3900

ATTCGCATTC TCATTACTTC CCCTTTGCCA AGATGAATAG GCATCCGCAA AATAAAACAG 3960

AATTCCCATT TGTTCAATTA AAGGGTAACA AGCAAACTCT TTTTCTCTGT CCGAAGTGAA 4020

AGTCTTTAAC TATTCTTTTG GAAAGAGTCT TGTGAGGTGT TCAATAGCAG TCAACATGGA 4080

TTTAGCTGTT TTTACTTGAC AAGTGCTAGT AGAAATAATA GAATAGTAAA AAACCTTTAA 4140

AGCAGTCCAG AGAGGCAGCT AAGGTTAGAC GGTGAAAGGG TGGAGACTAC CCATTTTTCG 4200

TGGAACCTTG CTGTTGGCAG GTTCCTTTTT TCGTGGCTTC TGTTGGCCAG ACTCTCTCAC 4260

TAGTAAAGGT AAAAGGAGAA ACCTATGCGA GAACATCGTC CAATCATTGC TCTTGATTTT 4320

CCTAGTTTTG AGGCGGTCAA GGAATTTTTA GCTCTTTTCC CAGCAGAAGA AAGCCTTTAT 4380

CTCAAGGTAG GGATGGAGCT TTATTACGCA GCGGGGCCTG AGATTGTGTC CTACTTAAAA 4440

GGTTTGGGTC ATAGTGTCTT TTTGGATCTC AAACTTCATG ACATTCCTAA TACAGTCAAG 4500

TCAGCCATGA AGATCTTGTC TCAGCTTGGT GTCGATATGA CTAATGTCCA TGCGGCTGGT 4560

GGTGTAGAGA TGATGAAGGC GGCGCGTGAA GGTCTTGGGA GTCAAGCCAA ATTGATCGCT 4620

GTAACTCAGC TCACATCAAC GTCAGAAGCT CAGATGCAGG AGTTTCAAAA TATCCAAACC 4680

AGTCTGCAAG AGTCTGTGAT TCACTATGCC AAGAAGACAG CTGAAGCTGG CTTGGATGGT 4740

GTTGTTTGCT CGGCTCAGGA AGTACAAGTC ATCAAGCAGG CTACCAATCC AGATTTTATC 4800

TGTCTGACAC CAGGGATTCG TCCAGCTGGT GTTGCAGTTG GAGATCAAAA ACGAGTCATG 4860

ACACCTGCTG ATGCCTATCA AATCGGCAGT GACTATATCG TAGTGGGACG TCCCATTACC 4920

CAAGCTGAGG ATCCTGTTGC AGCTTATCAT GCCATCAAGG ATGAATGGAC ACAGGACTGG 4980

AATTAAAGAA CTAGATTAGA AAAATAAAAG GAGAATACCA TGACACTTGC TAAAGATATC 5040

GCTAGCCACC TCTTGAAAAT CCAAGCCGTT TACCTCAAAC CAGAGGAACC CTTCACTTGG 5100

GCATCTGGTA TCAAGTCACC GATTTACACT GATAATCGTG TGACACTAGC CTATCCAGAA 5160

ACTCGTACCC TAATTGAAAA TGGTTTTGTG GAAGCTATCA AAGAAGCCTT TCCTGAAGTA 5220

GAAGTGATTG CAGGAACTGC AACAGCAGGG ATTCCACACG GAGCCATTAT TGCTGATAAG 5280

ATGGACTTGC CTTTTGCCTA CATCCGTAGT AAACCAAAAG ACCACGGAGC TGGTAATCAA 5340

ATCGAAGGTC GCGTAGCTCA AGGTCAAAAA ATGGTAGTGG TTGAAGACCT TATTTCAACG 5400

GGTGGTTCAG TTCTTGAAGC TGTAGCAGCA GCCAAGCGAG AAGGAGCAGA TGTACTTGGA 5460

GTTGTAGCGA TTTTCAGCTA CCAATTGCCA AAAGCAGATA AGAACTTTGC AGATGCTGGT 5520

GTTAAACTTG TGACGCTTTC AAACTATAGC GAGCTTATCC ATCTAGCCCA AGAAGAAGGT 5580

TACATCACGC CAGAGGGCCT TGATCTTCTA AAACGCTTTA AAGAAGACCA AGAAAATTGG 5640

CAAGAAGGTT AGGTCAGTAA GATAAAGAGA GACGAGGCTA CCGAGTCTCT TTTACCATTT 5700

TATTTAAAAT ATGACAG 5717

(2) INFORMATION FOR SEQ ID NO: 103:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 5558 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 103:

CCTGGACTTT CTAAAATGAA ATCTTGCGAC CTGGATCAAG CCCTTCATGA GCATTTTTCA 60

GAAGAAGAAT TAGCTGGTCA CTTTCATGTC CTTCTATGGA CTTTTTTTAC AATGGCATTG 120

CTATCACACC CAATACCTAT CTAAGCGCCT GGTTCGTAAA CTTTATTGCA GCTCTTCCTC 180

TAAATTTCCT AATTGTTGAA CCAATTGCCC GTTTTATACT AAGTTCTTTT CAGAAACCAT 240

TTACTGGGGA AGAAGTTGAA GATTTTCAAG ATGATGATGA AATCCCAACT ATTATCTAAG 300

CCAGTTCTGT AAACTACTAA TATTTGAAAT CCACTTCCTT TTAGGGTGCA ATGGTTATAA 360

ATGAATTTTT GAGAGGATCA GAATGAAAAA ACTAGCAACC CTTCTTTTAC TGTCTACTGT 420

AGCCCTAGCT GGGTGTAGCA GCGTCCAACG CAGTCTGCGT GGTGATGATT ATGTTGATTC 480

CAGTCTTGCT GCTGAAGAAA GTTCCAAAGT AGCTGCCCAA TCTGCCAAGG AGTTAAACGA 540

TGCTTTAACA AACGAAAACG CCAATTTCCC ACAACTATCT AAGGAAGTTG CTGAAGATGA 600

AGCCGAAGTG ATTTTCCACA CAAGCCAAGG TGATATTCGC ATTAAACTCT TCCCTAAACT 660

CGCTCCTCTA GCGGTTGAAA ATTTCCTCAC TCACGCCAAA GAAGGCTACT ATAACGGTAT 720

TACCTTCCAC CGTGTCATCG ATGGCTTTAT GGTCCAAACT GGAGATCCAA AAGGGGACGG 780

TACAGGTGGT CAGTCCATCT GGCATGACAA GGATAAGACT AAAGACAAAG GAACTGGTTT 840

CAAGAACGAG ATTACTCCTT ATTTGTATAA CATCCGTGGT GCTCTTGCTA TGGCTAATAC 900

TGGTCAACCA AACACCAATG GCAGCCAGTT CTTCATCAAC CAAAACTCTA CAGATACCTC 960

TTCTAAACTC CCTACAAGCA AGTATCCACA GAAAATTATT GAAGCCTACA AAGAAGGTGG 1020

AAACCCTAGT CTAGATGGCA AACACCCAGT CTTTGGTCAA GTGATTGACG GTATGGATGT 1080

TGTGGATAAG ATTGCTAAGG CCGAAAAAGA TGAAAAAGAC AAGCCAACTA CTGCTATCAC 1140

AATCGACAGC ATCGAAGTGG TGAAAGACTA CGATTTTAAA TCTTAAAAAC CAAAAAAATA 1200

CAGTATCCAC ATTCGGTACT GTATTTCTTT TACTCTCATT CTTAAGTTAA ATTATTAAAA 1260

TCCCATATTT GGTCTATCCA GCCTTCATAA AAGTCTGGCT CGTGGCAGAC CATAAGGATA 1320

GATCCCCTAT ATTCTTTGAG AGCGCGTTTG AGCTCATCCT TTGCATCCAC ATCCAAATGG 1380

TTGGTCGGCT CGTCCAGCAC TAAAACGTTG TTTTCACGAT TCATCAAGAG ACAGAAACGA 1440

ACCTTGGCTT GCTCTCCCCC TGATAATACT TGAATCTGGC TTTCAATATG TTTGGTTGTC 1500

AAACCACAAC GGGCAAGGGC TGCACGGACT TCTGCTTGAT TAAGGGCAGG AAAGGCATTC 1560

CAGACAGCTT CAAGAGGAGT TTGGCGATTA CCGCCTTCTA CTTCCTGCTC AAAATAACCA 1620

AGTTCTAAAT AATCTCCACG CTCCACTTCC CCAGCGATTG GCGAGATAAT GCCCAAGAGA 1680

CTCTTCAAGA GAGTTGTTTT TCCAATACCA TTAGCACCAA TAATCGCAAC CTTTTGATTG 1740

CGTTCGAAGG TAAGATTTAA AGGCTTAGTA AGAGGACGGT CGTAACCAAT TTGCAAGTTC 1800

TTGGCTTGGA AGATAAAGCG CCCTGGTGTA CGAGCTGGTT TGAAATCAAA GGATGGTTTT 1860

GGTTTCTCAC TTTGGAGTTC GATAATATCC ATCTTATCCA ATTTCTTTTG ACGAGACATA 1920

GCCATATTAC GAGTTGCAAC ACGGGCTTTA TTACGAGCCA CAAAGTCCTT GAGGTCTGCA 1980

ATCTCTTTCT GCTGGCGTTC GTAGGCTGCC TCTAGCTGAG ATTTCTTCAT AGCATAAACT 2040

TCTTGGAACT GGTAGTAGTC ACCAGAGTAA CGCGTCAGCT GTTGATTTTC CACATGATAG 2100

ACAATATTAA TAACGTCATT GAGGAATGGA ATATCGTGCG AAATGAGAAC AAAGGCATTC 2160

TCATAGTTTT GGAGATAGCG CTTGAGCCAA TCAATATGCT CAGCATCCAA GTAGTTGGTC 2220

GGCTCGTCCA ACAGCAAGAT ATCAGGCTTT TCAAGGAGAA GTTTTGCCAA AAGCACCTTG 2280

GTTCTTTGCC CACCTGACAA AGAAGTTACA TCCGTATCCA TGCCAAAGTC CATAACACCA 2340

AGAGCACGCG CTACTTCGTC AATCTTAGCA TCCAAGGTAT AGAAATCACG ACTCTCCAGA 2400

CGGTCTTGAA GTTCTCCTAC TTCTTCCATG AGAGCATCAA CATCCGCGCC GTCTTCAGCC 2460

ATTTTCATAT AGAGGTCATT GATACGAGCT TCAGCTTTGA AAAGCTCATC AAAAGCCGTA 2520

CGGAGAACAT CACGCACCGA CTGTCTTTCA GCAAGGACAG AGTGCTGATC CAAGTAACCA 2580

GCCGTCACAT ATTTGGACCA CTCAACCTTT CCTTCATCTG GCAGCATTTT ACCAGTCACG 2640

ATACTCATAA AGGTTGATTT TCCTTCACCA TTGGCACCGA CCAGGCCGAT ATGTTCTCCC 2700

TTGAGGAGAC GGAAGGACAC ATCTTCAAAA ATTGCACGGT CACCAAAACC GTGACTCAGA 2760

TTTTTAACTT CTAAAATACT CATTTTAATT CCTTACCTTG TTTTTATGTA ATCGTTTATA 2820

AAGGAGCCAA GCCAGATAGC CACCCAAAGT GTTGGTCCAC AAATCATCAA TCTCAAAGAC 2880

GCGATTGAAA TCAAAGAAAA AGTCCAAGAT TAATTGCGTA CACTCGATTC CAAGACTCAC 2940

AAGAAAACTA AAAAGAAGGA CCTTTTTTGT TTTCCGCAAA TTTGGAAATA GATAAAGGAG 3000

TTGGAAAATC AGAGGAAAAA ACAAGAAGAC ATTGAGGATA TTTTGTAAAA AAATCCAACA 3060

TAATTGTCCA ATGTCACTCA CTTCGCCCAG TTTCCAGAGA GAATTGAAAG GAGTCAAAAG 3120

AAAAACCAGG CGTCCAAGAT GCTGAATACC TGGAGTTCCC ACTCCCACGG TAGATTGTTC 3180

TTGAGGAGTA AAGCAAAAAC AGACAATGCA AATGCTATAG AAAATGACTC CCCAGACCAA 3240

AATATGATTA TAAGTCTTCT TCATCATTAA GGATTTACCG CTGCGACTGC CTTCTGGCGG 3300

TCACGTTTCA TTGTGTTAGA GCGCAATTGT CCACAAGCTG CGTCAATATC TGTACCATGC 3360

TCTTGACGAA CCACACAGTT GACCCCTTTT TTCTTAAGCG TATCATAGAA AGCCAACACG 3420

CACTCTTTGG GACTACGGCT ATATTGGTCA TGCTCACTAA CTGGGTTATA AGGAATCAAG 3480

TTTACATAAG ACAATTTCTT GATGTTCTTG AGCAATTCAG TCAATTCCAA GGCTTGTTCT 3540

ACACCGTCGT TGACTTCATT AAGCATGATA TATTCAAAGG TTACACGACG GTTTGTTGTC 3600

TCAATGTAGT ATTCAATAGC AGCAAAGAGT TTTTCAATCG GAAAGGCACG GTTAATCTTC 3660

ATGATACTTG AACGAAGTTC ATTGTTAGGT GCGTGAAGAG ACACGGCAAG ATTGACCTGA 3720

ACCCCTTCAT CAGCAAAGTC ACGAATTTTA TGAGCCAAAC CTGAGGTTGA AACCGTGATG 3780

TGACGAGCAC CGATAGCCAT TCCTTTATCA TCATTGATAG TACGAAAGAA ATTCAAGACA 3840

TTGTTGTAAT TATCAAAGGG CTCACCGATT CCCATGACAA CGATATGGCT GATGCGTTCA 3900

TCCTGACCAC GCTCATCAAA GTATTTCTGA ACCAGCATGA TTTGCGCTAC GATTTCACCG 3960

TTATTGAGGT CACGTTGCTT CTTAATCAAA CCAGAGGCAC AGAAGGTACA ACCGATATTA 4020

CAGCCGACCT GAGTGGTCAC ACAGACAGAT AAACCATAGT GTTGACGCAT GAGTACAGTC 4080

TCAATTAACA TACCGTCGGG CAATTCAAAG AGATATTTGA CTGTACCATC AGCAGACTCT 4140

TGCACAATAC GTTGTTTCAA GGGATTGACC ACAAACTGGT CATTGAGCTT AGCAATCAAA 4200

TCCTTGGAAA GGTTGGTCAT TTCTTCAAAT GACTGCACAC GTTTACGGTA GAGCCATTCC 4260

CAGATTTGAT CTGCACGGAA TTTCTTTTCT CCCTGCTCCA ATACCCATTC CTGCATGGTT 4320

TGATGTACCA AACTATGAAT TGAGGGTTTC ATTTCTTCTC CTTATTCTCT ACTCACTTCT 4380

GACGAATGAC AAAATGACGT TGTCCCTTGT CGTCTTTCTG ACGACGTCTA TTTTTCTTAT 4440

CTGCATTCGA CTTTCGTTTA GTTTGAGTCG GTTTCTTTCC TTTTCTAGAA GGTGTTTCTT 4500

CTTCCGTCTT ACGCATTTTC TTGTCAAATG ATGCTCGCTT AGGGGCTTCA TTTTCTAAGA 4560

CAAAATAGGC ACAACCATAA CTACAATACT CTAAAAGGTA GTCTTGTAAA CGACTGATTT 4620

TTTCAAGTTT TTCTTCTGTT CGGTCATCCT TGTAAAAACC TCGTAGGCGA AGCTGTTCGT 4680

TGCTCCAGTC CCCCACGATA TAATCAAACT TGGTTAATAC TTCTGAAAAA CGCTGATTAA 4740

AAGTCGTCAC ATCAAAGGCA TCCTTGATAT TTTCAACCAA GGAAAAAGCT ATCCCTTCCG 4800

TTTCGACCTT GTCCCCGTGT AAATGGAACT CCGGACCAGG AAACTTGTTA TAGTTGTATA 4860

ATTCAGGTGC AATTTCTTTT CGCATAGATA TCCTTTTTTC ACGATTACTT AATACTTTAT 4920

TCTACCATAA TTTCTAGCAG TTAGCACGTT TCTCATAAAA ATGAAAAAAG TCTGACGATT 4980

TTGTCAGACC AGAATCTTAT AACCTAAAAA GAGAAGAACA ATTCTTCCCT CCAACTATCA 5040

TTATTTAGCA GCTGCGTACA ATTCATCTAC TTTATTCCAG TTGATTACTG AAAAGAAAGC 5100

TTTGATGTAG TCAGGACGCA CGTTGCGGTA TTTCACGTAG TAAGCATGTT CCCAAACGTC 5160

CAAGCCCAAG ATTGGTTTTT TACCTTCTGA GATTGGTGTG TCTTGGTTTG CTGTTGAAGT 5220

CACTTCAAGT TTCCCTTCTT TGTTGACAAC CAACCATGCC CAACCTGAAC CAAAACGAGT 5280

TGTTGCTGCT GCAGTGAAGG CTGCTTGGAA TTCTTCAAAT GAACCAAATG TTGCATCGAT 5340

TGCTGCTGCC AGTTCTGCTG AAGGAGCTGT TTTCTCGGGA GTCATCAATT CCCAGAAAAG 5400

AGCGTGGTTC AAGTGTCCGC CACCATTGTT GATAAGTGCT TGACGGATAT CAGCTGGGAT 5460

AGATTCTACA TCAGCAAGCA AGGCTTCAAG GTCTTCACCG ATTTCAGGGT GTTTTTCTAA 5520

AGCTGCATTG GCATTGTTGA CATAAGTTTG ATGGTGTT 5558

(2) INFORMATION FOR SEQ ID NO: 104:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 6735 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 104:

GGAATTGTAA ATATCATATT GTTTTTGCAC CCAAATATCG TCGTCAAATC ATTTATGGCA 60

GATACAAAGC TAGTATCGGA AGAATCATAC GTGACTTATG TGAGCGTAAG GGTGTAATAA 120

TCCATGAAGC GAATGCTTGT TCAGACCATA TTCACATGCT TATCAGTATT CCTCCGAAAC 180

TTAGTGTTTC GTCCTTTATG GGCTATTTAA AGGGCAAGAG CAGTTTGATG ATTTTTGATA 240

AGCATGCGAA TTTAAAATAC AAATATGGCA ATCGCAAGTT TTGGTGTAGA GGCTATTATG 300

TAGATACGGT AGGCCGTAAT CAGAAAGTGA TAGCTGAATA TATTCAGAAT CAATTACAAG 360

AAGACAGAGT AGCAGACCAG CTCACGTTAT TCGAGTCAGT AGATCCGTTT ACTGGCGAAA 420

TAAATAAGAG GAAGTAACTA AGGTGCTTTA GCACCTGCTC GGGAAAGTGG TGCGCGAGGA 480

AGCTATTTCG GTGGGCCTTT GGCCCTGGCC GGTAGAAGCG GCTTATAGCC GCAGAACAAA 540

CCACCAGTTC ACACTGGTGG TTTTGATTTA AAAAACTTGA TACATAAAAA TAAAAGTCTA 600

TATAAAGGAT GGTAAAATTC CTGTTGTCCG ATTTGGACAA TATCCTAAAT AGTTACAATA 660

TATGGTCTAT ACTTTTTCTT AGGAGAAAGC TAGATGTACA GACGTTTGAG AGATTTGAGG 720

GAGGATCATG ATCTGCCCCA AAAGCAAATA GCTACAATAC TTTCGTTTAC AAATTCAGCT 780

TATGCCAAAA TTGAACGGGG TGAGCATGCG TTGACGGCTG ATGTATTGGT TAAACTCTCA 840

GATTTCTATG ACGTCAGTAC AGACTATTTA TTGGGATTAA CTGATTTTCC TGATAAAATT 900

CGCTTTAGAA AATAATCTCC TCAATTTCAT AGAGTTTGAA AATGAGTGAG ATTTTTTATT 960

TGCCCTTTGA CAACTGAATA GCCTAAAATG GTACTTTCCT CATTTGTGGA GCAAATTTGA 1020

ATGGCTCGCC ATGATAAGAG CGATTTTAAA ATCATCAATA AAATAGAGCG ATACTTTATA 1080

TGCCATGATA CAAATGATAT ACAATGATAC TTCTGACCGT TCAGCCTGCC AACGTAAAAG 1140

AGCAGCAAGT GAAATTCTTA TGATGACTTC ATCAGTCATG CCACGTTGAA TGTGTGAGTT 1200

TGTTAGATAA ACGCAATTAA TCCTCAAAAG GTTCCCCGAA CCTTTTGAGT TCTACAGACG 1260

CATCACGTGG AGTGTGTAAG CTTGTTGCTA AAAGCGTAAA AACCTTGGAA CGAAAGGAAT 1320

AATAGACTTT CTGCGAAACA AAAATATAAT ACAATAAAAC TATGAATGAT GAAGCAAGTA 1380

AACAATTGAG CGATAGCCGT TTCAAGATCC TTGTAGGTGT TCAGCGCACG ACTTTTGAAG 1440

AGATGTTAGC TGTGTTAAAA ACAGCTTATC AACGTAAACG CGCAAAAGGT GGACGAAAAA 1500

GCAAATTAAG CCTAGACGAT CTCCTTATGG TAACTATTCA ATACATGCGA GAATAGAGCA 1560

CTTATGAACA AATTGCGGCT GATTTTGGCA TTCACGAAAG CAACTTAATC CGTCGGAGTC 1620

AATGGGTTGA AGCAACTCTT ATTCAAAATG GTTTTACGAT TTCAAATTCT GCCTTAATTC 1680

TGTAAAAACA GTAAAATTCG AAGGATTGTA AGGTAAGAGT TTTTTTCTTT CTGAAAAAAT 1740

GGTATAATAG CAATCAAAAC TAGAAAATAA AACGGAATTT GGAACAGATT TGTCTGTATC 1800

CTAGTAGAGT GGTGATACTA TGAAGATTAG TAAGAGGCAC TTATTAAATT ATTCCATCTT 1860

GATTCCCTAC TTGCTTTTAT CTATTTTGGG CTTGATTGTG GTCTATTCGA CCACCAGTGC 1920

TATTTTAATT GAAGAAGGCA AGAGCGCCTT GCAGTTGGTT CGAAACCAAG GAATCTTTTG 1980

GATTGTTAGT TTGATACTGA TTGCCTTAAT TTATAAATTG AGACTAGATT TTTTGAGAAA 2040

TGAGCGACTA ATCATTTTAG TTATATTAAT AGAAATGCTT TTATTGTTCT TGGCTCGTTT 2100

TATTGGTATT TCCGTAAACG GGGCATACGG TTGGATTTCG GTTGCAGGAA TAACTATTCA 2160

GCCAGCTGAG TACTTAAAAA TCATTATTAT TTGGTATTTA GCTCACCGAT TCTCCAAACA 2220

GCAAGAAGAA ATAGCTACTT ATGATTTTCA AGTTTTGACT CAAAATCAAT GGCTTCCCCG 2280

TGCTTTTAAT GATTGGCGAT TCGTTCTCCT AGTTCTGATT GGAAGTTTGG GAATTTTCCC 2340

TGATTTAGGA AATGCGACTA TTTTAGTCTT GGTTTCCTTG ATTATGTATA CAGTTAGTGG 2400

AATCGCTTAT CGCTGGTTTT CAACCATTCT GGCGCTCGTA TCTGCCGCTT CTGTCTTTGT 2460

CTTGACCACT ATCAGCCTAA TCGGTGTTGA GACCTTTTCA AAAATTCCAG TATTCGGCTA 2520

TGTAGCCAAG CGCTTTAGTG CCTTTTTTAA TCCTTTTGCC GATCGTGCTG ATGCAGGTCA 2580

CCAGTTAGCT AATTCTTATT TTGCCATGGT CAATGGCGGT TGGTTTGGTC TAGGTCTTGG 2640

AAACTCGATT GAAAAACGAG GTTATTTGCC AGAAGCTCAT ACAGACTTTG TCTTTTCTAT 2700

CGTGATTGAA GAATTTGGCT TTGTTGGTGC CAGTCTTATT TTAGCTCTCT TGTTTTTCAT 2760

GATTTTGCGG ATTATCTTGG TCGGTATCCG AGCGGAGAAT CCTTTCAATG CCATGGTTGC 2820

ACTCGGTGTC GGAGGGATGA TGTTGGTTCA GGTATTTGTC AATATCGGAG GGATTTCGGG 2880

CTTGATTCCA TCTACAGGAG TGACTTTCCC CTTCTTATCC CAGGGTGGAA ATAGTCTTCT 2940

AGTCTTATCA GTGGCAGTAG CCTTTGTCTT AAATATTGAT GCCAGTGAAA AACGCGCTAA 3000

ATTGTACCGA GAATTGGAAA ATCAACCAAT GAACCTTCTG TTGAAGTAGG ATAAAGAAAG 3060

GATAGTTTAT GTCTCTTCAA AAATTAGAAA ATTATAGTAA TAAAAGTGTT GTGCAAGAAG 3120

AAGTCTTGAT TCTAACAGAA TTACTGGAAG ATATTACTAA AAATATGCTT GCCCCAGAGA 3180

CCTTTGAAAA AATAATACAG TTGAAAGAAT TATCAACGCA GGAAGATTAT CAAGGTCTAA 3240

ACCGTCTAGT GACTAGCTTA TCAAATGATG AAATGGTCTA TATTTCACGC TATTTCTCTA 3300

TCTTGCCTCT TTTGATTAAT ATTTCAGAGG ATGTGGATTT AGCTTATGAA ATCAATCATC 3360

AAAATAATAT TGATCAGGAC TATTTAGGTA AATTATCTAC AACGATTAAA TTGGTAGCAG 3420

AAAAGGAAAA TGCCGTTGAG ATCCTAGAAC ACTTGAATGT TGTCCCTGTT TTGACAGCCC 3480

ATCCAACACA AGTGCAACGC AAAAGTATGT TGGATTTAAC AAATCATATT CATAGTCTTT 3540

TGCGTAAATA CCGTGATGTT AAGTTGGGGT TGATCAATAA AGATAAATGG TACAATGATT 3600

TGCGTCGTTA CATCGAAATT ATCATGCAGA CAGACATGAT TCGTGAGAAA AAATTAAAAG 3660

TGACTAACGA AATCACGAAT GCTATGGAAT ATTATAACAG CTCCTTTTTG AAAGCTGTAC 3720

CTCATTTGAC GACGGAGTAT AAGCGCTTAG CGCAAGCGCA TGGTCTGAAT TTAAAACAGG 3780

CTAAACCAAT CACCATGGGT ATGTGGATAG GTGGTGACCG TGATGGAAAT CCATTTGTTA 3840

CAGCAAAGAC CTTGAAGCAG TCTGCACTCA CTCAGTGTGA AGTCATCATG AACTACTATG 3900

ATAAAAAGAT TTACCAACTT TATCGTGAAT TTTCTCTTTC AACTAGCATT GTCAACGTCA 3960

GCAAGCAAGT CAGAGAAATG GCTCGTCAAT CCAAGGATAA CTCGATTTAC CGCGAAAAAG 4020

AGCTTTACCG TCGTGCCTTG TTTGATATTC AATCAAAAAT TCAGGCAACT AAAACCTATC 4080

TGATTGAGGA TGAAGAAGTT GGGACTCGTT ATGAAACCGC CAATGATTTC TACAAGGATT 4140

TGATTGCCAT TCGAGATTCT CTACTAGAAA ATAAGGGCGA GTCCTTGATT TCAGGTGATT 4200

TTGTGGAATT ATTGCAGGCA GTAGAGATAT TTGGTTTTTA CTTAGCATCA ATTGATATGC 4260

GACAAGACTC TAGCGTCTAT GAAGCCTGTG TGGCAGAACT CTTGAAATCA GCAGGAATTC 4320

ATTCTCGTTA TAGCGAGTTG AGCGAAGAAG AAAAGTGTGA CCTTCTCTTG AAAGAATTAG 4380

AAGAAGATCC CCGAATTCTT TCTGCGACTC ACGCAGAAAA ATCAGAATTA TTAGCAAAAG 4440

AATTAGCTAT TTTTAAGACG GCTCGTGTTT TGAAAGATAA GTTGGGAGAT GATGTCATCC 4500

GTCAGACCAT CATTTCACAT GCAACCAGCC TTTCTGATAT GCTAGAATTA GCTATTCTGT 4560

TAAAAGAAGT AGGACTGGTG GATACGGAAA GGGCGCGTGT TCAGATTGTT CCCCTTTTTG 4620

AAACAATTGA AGACTTGGAT CATTCAGAGG AAACAATGAG AAAATATCTT TCTCTTAGCC 4680

TTGCCAAAAA ATGGATTGAC TCACGAAATA ACTACCAAGA AATCATGCTT GGCTACTCTG 4740

ACAGTAATAA AGATGGCGGT TACTTGTCAT CATGTTGGAC CCTCTACAAG GCTCAACAAC 4800

AATTGACTGC TATTGGAGAT GAATTTGGCG TTAAGGTTAC CTTCTTCCAT GGTCGTGGTG 4860

GTACTGTCGG TCGTGGTGGT GGGCCAACCT ATGAAGCCAT TACATCTCAA CCGCTCAAGT 4920

CTATCAAGGA TCGTATCCGC TTGACGGAGC AGGGTGAAGT AATTGGGAAT AAATACGGTA 4980

ACAAAGACGC CGCTTACTAT AACCTTGAAA TGCTAGTATC GGCAGCTATT AACCGTATGA 5040

TTACTCAGAA GAAGAGCGAT ACCAATACCC CAAATCGTTA TGAAACCATT ATGGATCAAG 5100

TAGTGGACCG TAGTTACGAT ATCTACCGTG ATTTGGTCTT TGGTAATGAG CATTTCTATG 5160

ATTATTTCTT CGAGTCAAGT CCAATCAAGG CTATTTCAAG TTTTAATATT GGTTCTCGTC 5220

CAGCCGCTCG TAAGACTATT ACTGAAATCG GTGGTTTGCG TGCCATCCCT TGGGTATTCT 5280

CATGGTCACA GAGTCGTGTT ATGTTCCCTG GATGGTACGG GGTTGGTTCA AGCTTCAAGG 5340

AATTTATCAA TAAAAATCCA GAGAATATTG CTATCTTACG AGATATGTAC CAAAATTGGC 5400

CTTTCTTCCA ATCGCTTCTT TCAAATGTTG ATATGGTTTT GTCAAAATCA AATATGAATA 5460

TTGCTTTTGA ATATGCTAAA CTTTGTGAAG ACGAGCAAGT TAAGGCCATC TATGAGACTA 5520

TTTTAAATGA ATGGCAAGTT ACTAAGAACG TTATCTTGGC TATTGAAGGA CATGACGAAC 5580

TCTTAGCTGA CAATCCATAT CTAAAAGCTA GTCTGGATTA CCGTATGCCT TACTTTAATA 5640

TTCTCAACTA TATTCAGTTG GAGTTGATTA AACGCCAACG TCGTGGAGAA TTGTCCAGTG 5700

ATCAAGAACG ATTGATTCAT ATCACCATCA ACGGAATTGC GACAGGATTG CGTAATTCAG 5760

GTTGATAATT TTCAAGAGTG AATGCTAAAA GTGAATATCA AAAAAATTCT AATAGACTAT 5820

TGACAAGTAG TTTAAAAATG ATATAATTTA ACCATTCAGA AAAGTAATCA TACAAACTTT 5880

TTAGAGAGTC TGTGGTAGCT GAAAACAGAT AAGTGGCAAT GATGAAAATT GGGCTGAATG 5940

CTATTTAGAA TTTGAAATTA TAAAAATTCG GTAAGCACAC CTTACAGTGC ATCTCGTTAT 6000

TGCGAGACTG AGCGATAGGG AAATTCCCTA TAATTGAGGT GGTACCGCGC ATCGACGTCC 6060

TCACACAAGT TTTTTGTGTG AGGATTTTTT TGATGGAGGT TAGTATGGAA AGAAAACGAT 6120

GGCGTCGCTT GTTTAGATAA GTGAAATATG TTAAAGGAAA TAAAAAGGAG AAACAGAATG 6180

AAAAATAAAC GTTTAATTGG AATTATTGCT GCATTAGCAG TCTTAGTAGC AGGAAGCTTG 6240

ATTTATTCTT CAATGAATAA ATCAGAAGCT CAGAATAATA AGGATGAGAA GAAAATAACC 6300

AAGATTGGTG TGCTTCAATT TGTGAGCCAT CCATCCCTTG ATTTGATTTA TAAAGGGATC 6360

CAAGATGGAC TTGCAGAAGA AGGATATAAA GATGATCAAG TTAAAATTGA TTTTATGAAC 6420

TCAGAAGGTG ACCAAAGTAA GGTTGCGACA ATGAGTAAAC AATTGGTTGC AAATGGGAAT 6480

GACCTTGTGG TTGGTATCGC AACACCAGCA GCCCAAGGGT TGGCTAGTGC AACAAAAGAC 6540

CTACCGGTTA TCATGGCCGC TATTACAGAC CCAATTGGTG CTAACTTGGT TAAAGATTTG 6600

AAAAAACCAG GTGGCAACGT TACAGGGGTA TCTGACCACA ATCCAGCTCA ACAACAAGTT 6660

GAACTCATCA AGGCTCTGAC ACCGAATGTG AAAACAATCG GAGCTCTTTA CTCAAGTAGC 6720

GAAGACAATT CAAAA 6735

(2) INFORMATION FOR SEQ ID NO: 105:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 6516 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 105:

CTAGAGGATC CCAGCAGGTA AATTGGCTTC AGCTGGCAAA AAAGTTGCCC TCGTTGAACG 60

CAGCAAGGCT ATGTACGGTG GAACTTGTAT CAACATTGGT TGTATCCCAA CTAAAACCTT 120

GCTAGTTGCT GCTGAAAAGG ACTTGTCTTT TGAAGAAGTC ATTGCTACTA AAAACACGAT 180

CACTGGTCGC CTCAACGGTA AAAACTATGC GACTGTTGCT GGTACAGGCG TAGATATCTT 240

TGATGCGGAA GCTCACTTCC TTTCAAATAA AGTCATCGAA ATCCAAGCTG GTGATGAAAA 300

GAAAGAACTG ACTGCTGAAA CAATCGTCAT CAACACTGGT GCTGTTTCAA ACGTCTTGCC 360

AATCCCTGGA CTTGCTACAA GCAAAAACAT CTTTGACTCA ACAGGTATCC AAAGCTTGGA 420

CAAATTACCT GAAAAACTTG GAATCCTTGG TGGCGGAAAT ATCGGTCTTG AATTTGCCGG 480

CCTTTACAAC AAACTTGGAA GCAAGGTCAC AGTCCTAGAT GCCTTGGATA CATTCCTACC 540

TCGTGCAGAA CCTTCCATCG CAGCTCTTGC TAAACAATAC ATGGAAGAAG ATGGCATTGA 600

ATTGCTTCAA AATATCCATA CTACTGAAAT CAAAAACGAT GGTGACCAAG TGCTTGTCGT 660

AACTGAAGAC GAAACTTACC GTTTCGACGC CCTTCTCTAC GCAACTGGAC GCAAACCAAA 720

TGTAGAACCA CTTCAACTTG AAAATACAGA TATTGAACTA ACTGAACGTG GTGCTATTAA 780

AGTAGACAAA CACTGTCAAA CAAACGTTCC TGGTGTCTTT GCAGTTGGAG ATGTCAACGG 840

TGGCCTTCAA TTTACTTACA TTTCACTTGA TGACTTCCGT GTTGTTTACA GCTACCTTGC 900

TGGAGATGGC AGCTATACAC TTGAAGACCG TCTCAATGTG CCAAATACTA TGTTCATCAC 960

ACCTGCACTT TCACAAGTTG GTTTGACTGA AAGCCAAGCA GCTGATTTGA AACTTCCATA 1020

CGCTGTTAAG GAAATCCCCG TTGCAGCAAT GCCTCGTGGT CACGTAAATG GAGACCTTCG 1080

CGGTGCCTTC AAAGCTGTTG TCAATACTGA AACAAAAGAA ATTCTTGGAG CAAGCATCTT 1140

CTCAGAAGGT TCTCAAGAAA TCATCAACAT CATCACTGTT GCTATGGACA ACAAGATTCC 1200

TTACACTTAC TTCACAAAAC AAATCTTCAC TCACCCAACC TTGGCTGAGA ACTTGAATGA 1260

CTTGTTTGCG ATTTAAGTTG AGATTTAATC GTATCGAACA GCCCTCTTTG GGCTGTTTTT 1320

ACTTCTGCGG AATCTCAAAT CTGTCTTTCT CCTCTTTTAT GATATAATAG AAACATGAAC 1380

TTAAAAACTA CTTTGGGCCT TCTTGCTGGG CGTTCTTCCC ACTTCGTTTT AAGCCGTCTT 1440

GGACGTGGAA GTACGCTCCC AGGGAAAGTC GCCCTTCAAT TTGATAAAGA TATTTTACAA 1500

AACCTAGCTA AGAACTACGA GATTGTCGTT GTCACTGGAA CAAATGGAAA AACCCTGACA 1560

ACTGCCCTCA CTGTCGGCAT TTTAAAAGAG GTTTATGGTC AAGTTCTAAC CAACCCAAGC 1620

GGTGCCAACA TGATTACAGG GATTGCAACA ACCTTCCTAA CAGCCAAATC TTCTAAAACT 1680

GGGAAAAATA TTGCCGTCCT CGAAATTGAC GAAGCCAGTC TATCTCGTAT CTGTGACTAT 1740

ATCCAGCCTA GTCTTTTTGT CATTACTAAT ATCTTCCGTG ACCAGATGGA CCGTTTCGGT 1800

GAAATCTATA CTACCTATAA CATGATATTG GATGCCATTC GGAAAGTTCC AACTGCTACT 1860

GTTCTCCTTA ACGGAGACAG TCCACTTTTC TACAAGCCAA CTATTCCAAA CCCTATAGAG 1920

TATTTTGGTT TTGACTTGGA AAAGGGACCA GCCCAACTGG CTCACTACAA TACCGAAGGG 1980

ATTCTCTGTC CTGACTGCCA AGGCATCCTC AAATATGAGC ATAATACCTA TGCAAACTTG 2040

GGTGCCTATA TCTGTGAAGG TTGTGGATGT AAACGTCCTG ATCTCGACTA TCGTTTGACA 2100

AAACTGGTTG AGTTGACCAA CAATCGCTCT CGCTTTGTCA TAGACGGCCA AGAATACGGT 2160

ATCCAAATCG GCGGGCTCTA TAATATCTAT AACGCCCTAG CTGCTGTGGC CATCGCCCGT 2220

TTCCTAGGTG CCGATTCGCA ACTCATCAAA CAGGGATTTG ACAAGAGCCG TGCTGTCTTT 2280

GGACGCCAAG AAACCTTTCA TATCGGTGAC AAGGAATGTA CCCTTGTCTT GATTAAAAAT 2340

CCAGTCGGTG CAACCCAAGC TATCGAAATG ATCAAACTAG CACCTTATCC ATTTAGCCTA 2400

TCTGTCCTCC TTAATGCCAA CTATGCAGAT GGAATTGACA CTAGCTGGAT CTGGGATGCA 2460

GACTTTGAAC AAATCACTGA CATGGACATT CCTGAAATCA ACGCTGGCGG TGTTCGTCAT 2520

TCTGAAATCG CTCGTCGCCT CCGAGTGACT GGCTATCCAG CTGAGAAAAT CACTGAAACG 2580

AGTAATCTGG AGCAAGTTCT CAAGACCATT GAGAATCAAG ACTGCAAGCA TGCCTATATT 2640

CTGGCAACTT ATACTGCCAT GCTGGAATTT CGTGAACTGC TGGCTAGTCG TCAGATTGTT 2700

AGAAAGGAGA TGAACTAATG GTTTATACTT CACTTTCCTC AAAAGATGGC AATTACCCCT 2760

ATCAGCTCAA CATTGCCCAC CTCTACGGAA ATCTCATGAA TACtACGGGG ACAATGGAAA 2820

CATCCTCATG CTCAAGTATG TGGCTGAAAA ACTGGGAGCC CATGTGACCG TTGACATCGT 2880

TTCTCTCCAT GATGACTTTG ATGAAAATCA CTACGACATC GCCTTTTTCG GTGGTGGTCA 2940

AGACTTTGAA CAAAGTATCA TTGCAGACGA CCTACCTGCT AAAAAAGAGA GCATTGACAA 3000

CTACATCCAA AACGACGGTG TAGTTCTGGC TATCTGCGGT GGTTTCCAAC TATTGGGTCA 3060

ATATTATGTT GAAGCTTCAG GAAAACGTAT CGAAGGGCTA GGGGTCATGG GACACTACAC 3120

GCTCAACCAG ACCAATAACC GTTTTATCGG TGACATCAAG ATTCACAATG AAGATTTCGA 3180

TGAAACCTAC TATGGATTTG AAAATCACCA AGGTCGTACC TTCCTCTCTG ATGACCAAAA 3240

ACCGCTGGGA CAGGTTGTCT ATGGAAATGG AAACAACGAA GAAAAGGTCG GTGAAGGGGT 3300

TCATTATAAG AATGTCTTTG GTTCCTACTT CCACGGGCCT ATCCTCTCTC GTAATGCCAA 3360

TCTGGCTTAT CGCCTAGTTA CTACTGCCCT CAAGAAGAAA TATGGTCAGG ACATCCAACT 3420

CCCTGCCTAT GAGGACATTC TCAGCCAAGA AATCGCTGAA GAGTACAGTG ACGTCAAAAG 3480

CAAGGCTGAC TTTTCTTAAA CAAAGGAAAA TGATATCAAA GAACTCCGTT ATCTTGTCGG 3540

AGTTTTTTGT CTTTTCTTTT ACCCTTCTCC CTTGCATTTT CTCTCATTTT TTGCCAAAAT 3600

AGAGGGGTAG AAAGAAGGTA GCATATGTCT AAATTACAAC AAATCCTAAC ATATCTTGAA 3660

TCAGAAAAAC TAGACGTCGC TGTCGTATCT GACCCCGTCA CAATCAATTA CCTCACTGGT 3720

TTTTACAGTG ATCCCCATGA ACGCCAAATG TTCCTCTTTG TCCTAGCAGA TCAGGAACCT 3780

CTCCTCTTTG TCCCAGCTCT TGAAGTAGAA CGTGCAAGTA GCACCGTTTC CTTCCCAGTA 3840

GTGGGCTATG TCGATTCTGA AAATCCATGG CAAAAAATCA AACATGCTCT TCCACAACTT 3900

GACTTCAAAC GTGTCGCTGT TGAGTTTGAC AATCTCATCT TGACCAAATA CCATGGTTTG 3960

AAAACAGTTT TTGAGACTGC TGAGTTTGAC AACCTCACTC CTCGTATCCA ACGCATGCGC 4020

CTCATCAAAT CAGCTGATGA AGTGCAAAAA ATGATGGTTG CAGGTCTTTA TGCTGACAAG 4080

GCTGTTCATG TTGGTTTTGA CAATATTTCT CTTGATAAGA CTGAGACAGA TATCATCGCA 4140

CAAATCGACT TTGCCATGAA ACGTGAAGGT TATGAAATGA GCTTTGATAC CATGGTCTTG 4200

ACTGGTGATA ATGCTGCGAA TCCACACGGC ATTCCAGCAG CTAATAAGGT TGAAAATGAT 4260

GCTCTTCTCC TCTTTGACCT GGGTGTTCTG GTCAATGGCT ATGCGTCAGA TATGACTCGT 4320

ACAGTCGCTG TCGGCAAACC AGACCAATTC AAGAAAGATA TTTACAACTT GACTCTTGAA 4380

GCCCAACAAG CTGCTCTTGA CTTTATCAAG CCAGGTGTGA CTGCTCATGA AGTGGACCGC 4440

GCTGCCCGTG AGGTCATCGA AAAAGCTGGT TATGGTGAGT ACTTCAACCA CCGTCTCGGG 4500

CATGGTATCG GTATGGATGT CCATGAATTC CCATCTATCA TGGAAGGAAA CGACATGGTC 4560

ATCGAAGAAG GCATGTGCTT CTCTGTTGAA CCAGGTATCT ATATCCCTGG TAAAGTCGGT 4620

GTTCGTATTG AAGACTGCGG TGTTGTTACC AAGGATGGCT TCAACCTCTT TACAAGCACC 4680

AGCAAAGATT TGCTTTATTT TGATTAAACT ATATAGCCCC TATGCTTTCC TTTCAAAATA 4740

TCTAGGGGCT ATTTTATTGT CATTTTTCTG CTATTATGCT AAAGAAATTG GCTGCAATAA 4800

TCTAACCCTA AGTGTCTGGA ATGATAACGA GGGTGCTCTC CGCTTTTATC AAAGACAAGG 4860

GATGAAACCC CAAGAAACAA CAATGGAAAT GATAATTGAT TAAGAAGTCA TCTATCAAAA 4920

GATGTTAGAA AAAGTTCAAT TTCACTAGAA AATGAGGAAA ATCTCCCCAC AATAAAACGC 4980

ATAGTATCAG GTATTGTGTA CTGACCCCAA ACAGTTAGAC AATTAATTTA TCCGAAGGAT 5040

TTAGTTCTGT ACTGCACAGG ACTAAGTCCT TTTAGTTTTA CCTTAATTCG TTTGTTGTTG 5100

TAGTAATCAA TATAGTCTAT AATGACTTGT TCCAATTGGT TAAGTGATTT AAATGTTTTC 5160

TCATAGCCAT AAAACATTTC GGATTTTAAA ATGCCAAAGA AAGATTCCAT CATACCGTTG 5220

TCTTGGCTGT TTCCCTTGCG TGACATAGAT GCTTGAATTC CCTTATTCTC TAGGAACCGA 5280

TGATAAGAAT CGTGTTGGTA TTGCCAGCCT TGGTCACTAT GGAGAATCGT ATTCTCGTAG 5340

TGCTTCTCTT TGAATGCCTG TTCCAACATT GTTTGTACTT ATTCTAAATT AGGCGAACAA 5400

GAAAGATTAA AAGCAATAAT TTCGCTGTTA AAGCCATCTA AAACTGGTGA TAAGTAAAGC 5460

TTTTGAGTAC TTGCTGGAAT GGCAAATTCA GTCACATCTG TGTAGCACTT TTCCATTGTT 5520

TTAGAGCCTT CAAATTGGGC TTGAATGAGA TTCTCTGCCT TCTTACCAAC GTCTCCTTTA 5580

TGAGAAGAAT ATTTTCGTTT CTTTCGCATT TTAGCTTGTA AATTGAGTAC TTTCATCAAG 5640

CCTTGAACTC TTTTATGATT TACCAGATAA CCACGATTTC TTAGTTCTAA ATGAACCCGG 5700

CGATAAGCAT AATTTCCCTT GTGTTCGATA AAGATGGATT GAATTTCAGT TTTAAGCTCT 5760

TGGTCTTTAT CTGTTTTGTC TAGCTGTTTC AAGTGATAGT AGTAGGTCCA ACGAGCTAGT 5820

TTAATGGCTT CTAGAAGAAG ATCTAACGAA AACTCAGTCA TTAATTCTTG AACAATTTCT 5880

GTCTTTCTTC TTTCTCTTTT TCCTCCTTCA ATCGGAGTTC TCTTAACTTT TTTAGGATGG 5940

CATTCTCCGC TCTCAGGTAC TCTCCCTCTT GTTTTCTCAA CAATAGTATA CCCGTTTTTC 6000

CTGTATTGTG CTAGCCAGTT AAGAAGTATC GTACGACTTG GGAGACCGTA TTCAAGAGAA 6060

ACTCTATCTT TAGTCCAGCC TTCATGTCAG ACTTTATTAA CCCCAATTAT TCACCCCAAA 6120

TCTAAAAACC ATCCAGAATC CTTGCCTTAG CTTAGATCCT GGATGGTTTC TTTTTTCACC 6180

CAATGGGTGT TTTTTACTAG ACAAAAAAGA GTTTCCCCTT TATGGTATAA GTGTAGAAAA 6240

AAACACAAAA AGAAAGGAAA CTCACATGAA CAGTTTACCA AATCATCACT TCCAAAACAA 6300

GTCTTTTTAC CAACTATCTT TCGATGGAGG TCATTTAACC CAGTATGGTG GTCTTATCTT 6360

TTTTCAGGAA CTTTTTTCCC AGTTGAAACT AAAAGAGCGG ATTTCTAAGT ATTTAGTAAC 6420

GAATGAmCAA CGCCGCTACT GTCGTTATTC GGATTCAGAT ATCCwTGTCC AGTTCCTCTT 6480

TCAACTGTTA ACAGGTTATG GAACGGAATA TGCTTG 6516

(2) INFORMATION FOR SEQ ID NO: 106:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 14654 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 106:

TTTTCAACCC ATATCGTGGC TCCTGAATAC TACTTACTGA CAACTATGCT ATCAGAGACT 60

TCTCTACTTG TTTTCTATAT CATTTTCATC CATAGAAAAC AACTCATCCA CTTGGGACAT 120

ATCTTTAGCT ATACTGTTCG ATACTCTCTC TTTTCACTTT CCTTTGTAGC AATTTATTTC 180

CTGATTAATT TCGTGTATCC TGTAGATATG GTCATTAATT TGCCATTTTT GATTAATACT 240

GGTTTGATTG TCTTGCTATC AGCTATCTCT TATATTAGTC TACTTGTCTT CACAAAAGAT 300

AGCATTTTCT ATGAATTTTT AAACCATGTC CTAGCCTTAA AAAATAAATT TAAAAAATCA 360

TAGGAGTTTA AAATGAAACA ACTAACCGTT GAAGATGCCA AACAAATTGA ATTAGAAATT 420

TTGGATTATA TTGATACTCT CTGTAAAAAG CACAATATCA ACTATATTAT TAACTACGGT 480

ACTCTGATTG GGGCGGTTCG ACATGAGGGC TTTATCCCTT GGGACGACGA TATTGATCTG 540

TCCATGCCTA GAGAAGACTA CCAACGATTT ATTAACATTT TTCAAAAGGA AAAAAGCAAG 600

TATAAGCTCC TATCCTTAGA AACTGATAAG AACTACTTTA ACAACTTTAT CAAGATAACC 660

GACAGTACGA CTAAAATTAT TGATACTCGA AATACAAAAA CCTATGAGTC TGGTATCTTT 720

ATCGATATTT TCCCTATAGA TCGCTTTGAT GATCCTAAGG TCATTGATAC TTGTTATAAA 780

CTGGAAAGCT TCAAACTGCT GTCTTTCAGT AAACATAAAA ATATTGTCTA TAAGGATAGC 840

CTTTTAAAAG ATTGGATACG AACAGCCTTC TGGTTACTCC TTCGACCGGT TTCTCCTCGT 900

TATTTTGCAA ATAAAATCGA GAAAGAAATT CAAAAATATA GTCGTGAAAA TGGGCAATAT 960

ATGGCTTTTA TCCCTTCAAA ATTTAAGGAA AAGGAAGTCT TCCCAAGTGG TACCTTTGAT 1020

AAAACAATCG ATTTACCCTT TGAGAATTTA AGCCTTCCTG CACCTGAAAA ATTTGATACT 1080

ATTTTGACAC AATTTTATGG AGATTATATG ACCCTACCAC CAGAAGAAAA ACGCTTCTAC 1140

AGTCATGAAT TTCACGCTTA TAAATTGGAG GATTAGGATG CAATATTTAG AAAAAAAAGA 1200

AATTAAAGAA ATTCAACTAG CCCTGCTGGA CTATATTGAT GAGACTTGTA AGAAACATGA 1260

TATTCCTTAT TTTCTCAGTT ATGGAACCAT GCTTGGAGCC ATCCGCCACA AAGGTATGAT 1320

TCCTTGGGAT GATGATATTG ATATTTCCCT TTATCGTGAG GATTATGAGC GTTTACTGAA 1380

GATTATTGAA GAAGAAAATC ACCCTCGCTA CAAGGTTCTT TCCTACGATA CATCTTCTTG 1440

GTACTTCCAT AATTTCGCAT CGATTTTGGA CACTTCTACT GTTATAGAAG ACCATGTTAA 1500

GTACAAGCGT CATGATACCA GCCTTTTCAT CGATGTCTTC CCAATTGATC GATTTACAGA 1560

CTTGAGCATT GTCGACAAGA GCTATAAGTA TGTGGCTCTT CGTCAACTAG CTTATATCAA 1620

AAAATCACGA GCAGTTCACG GTGATAGCAA ACTAAAAGAT TTTCTTAGAT TATGTAGCTG 1680

GTACGCTCTC CGATTTGTCA ATCCTCGCTA CTTTTACAAG AAAATTGATC AACTAGTCAA 1740

AAATGCTGTA ACCAACACTC CTCAATATGA AGGAGGAGTT GGGATCGGTA AGGAAGGGAT 1800

GAAAGAAATC TTCCCAGTTG ATACCTTTAA AGAACTGATT TTAACTGAGT TTGAGGGCCG 1860

TATGTTGCCT GTTCCCAAAA AATATGACCA ATTTTTAACC CAGATGTATG GCGATTATAT 1920

GACACCACCA TCAAAAGAAA TGCAAGAGTG GTATAGTCAT AGCATTAAAG CTTATCGCAA 1980

AAACTGATTG AGGGGGATTA TACAAACTAC TAAGATAGAG GTTATTCAAA AACATAATTT 2040

TAGTAGAAAA TGAAATACAT ATTCCCACAA TAAAACGCAT CATATCAAGG TTTTTGAAAA 2100

ACCTTGATAT GATGCGTTTT ATAATTTTAA AGACTTTTTT CTATAGTAGA TTGAAATAAG 2160

ATGCGAACAA ATCAATTAGA AAATTCAAAT TAATTTATAG AAATATTTTA GTATTCCTGT 2220

GTACTGTTCT AAATTCAGTC TGCTATATCT TATTTTTCTA TTTAAATCGC TTCTGTAACA 2280

AAGCTACGAC TTTCAAGTAC CTTAAGCATG GCATTAGCTG TATCTAGCGC TGTGAAGAGG 2340

GGCACCCCGT GTTCAATGGC TGAACGACGA ATTTGCTCAC CATCTTCGTC AGCAGTTCGT 2400

TTTGTTCCTA CTGTGTTAAT GATAGCTTGA ATTCTTCCTT TGCGTACAAA ACTTGGGATA 2460

TCCTTATCGT CATCACCAAT CTTACCAACA GGTTGGGCTT GCAAGCCATG ACTAGCAAAG 2520

AAGGCTGCTG TCCCTTCTGT CGCAAGGATT CCATAACCAA TGTTTTGGAA ACGACGAGCC 2580

AAGTTCAAGG CTTCTTCTTT GGCATCATCA GCGATGGTAA AGACGACATT ACCAAAAGTT 2640

GGCAAGTGTA GATAAGAAGC TTCAAAGGCT TTATAGAGAG CTTTTTCCAA AGTAGCATCA 2700

GAACCCATAA CTTCACCTGT TGACTTCATT TCAGGACCGA GCAAGCTGTC TACCTTAGCT 2760

AGTTTGGTAA AGGAGAAGAC AGGTGCCTTG ATATGAACAC GGGTGCTTTC AGGGTAAAGT 2820

CCATTTTGGT AGCCAAGTTC TGATAAACTT TGACCAAGAA TGAGTTTGGT CGCTACTTGA 2880

GCCATAGGAA TATTGGTTAC CTTAGATAGG AATGGAACAG TACGGCTGGC ACGTGGATTG 2940

ACCTCAATAA CGTAGACTTT TTCATCCTTG ATAACAAACT GGATGTTCAT CATTCCAAGG 3000

CAGTGAAGAC CGATTGCTAA GCGTTTGGTG TAGTCTGCGA TGGTCTCCTG AACCTTTTGC 3060

GACAAGGTTT GTGGTGGGTA AACAGCCATT GAGTCACCTG AGTGGACACC AGCACGTTCG 3120

ATATGCTCCA TGATACCAGG AATGAGTACA TTTTTACCAT CTGAAATGGC ATCAACTTCG 3180

CACTCTTGCC CAACGATATA AGAGTCGACA AGAACTGGGT GGTCTGGACT AGCCTTAACA 3240

GCAGTTCGCA TGTAAGAACG AAGGTCTTCT TCGTTTTCAA CGATTTCCAT GGCACGTCCA 3300

CCAAGTACAT AAGATGGGCG GACAAGAACT GGGAAGCCAA TCTTGCGAGC TGCAAGAGCT 3360

GCTTCTTCTT CATTGGTAGC CGTTTGTCCT GGTGGCTGTG GAATATCCAA TTCTTTGAGA 3420

GCTTGCTCGA AGAGGTCACG GTCTTCGGCA CGATCTAGGT CAGCAACCTG TGTACCAAGG 3480

ATGGTCACAC CTGCTTTTGC CAATGGCTCC GCAAGGTTGA TGGCTGTTTG ACCACCGAAC 3540

TGAACGATAA CTCCCTTTGG TTGTTCCAAG TCAATGACGT TCATAACATC TTCGAATGTC 3600

AATGGCTCAA AGTAAAGCTT ATCTGATACA GAGAAGTCTG TTGAAACGGT CTCTGGGTTT 3660

GAGTTCATGA TGATAGCTTC ATAACCAGCT GCCTGGATAG CCTTAACAGA GTGAACGGTT 3720

GCGTAGTCAA ACTCAACCCC TTGACCGATA CGGATTGGAC CTGAACCTAG GACAAGTACA 3780

GATTCTTTAT CAGATCTGAT AGATTCATTT TCCCAACCAT AGGTTGAATA GAAATATGGC 3840

GTTTCGGAGT CGAACTCTGC CGCACAAGTG TCTACCATCT TATAAACTGG AACAATCTTG 3900

TTTTCCAAGC GAAGTTGGCG AACTTTATCA TCAGTCGTTC CCCAGAGTTC AGCAATCTTA 3960

CGGTCTGAAA AACCATTAAG TTTGGCTGTT TTCAAAACTT CTAAATCTTG TGGATGAGCA 4020

CCCAATTCTT GCTCAATTTC AAAGATATGC AAGAGTTTAT CAAGATAGAA GATATCAATT 4080

TTTGTAAGCT CTGCAATTTC TTCAGGTGTG TAGCCACGAC GAATGGCTTC TGATACGTAG 4140

AAGAGACGGT CATCTTGGGC TTTGACAACC TTTTCAATCA AGGCATCATC AGAAACTGCT 4200

GCAAGTTCAG GTATTTCATT GTGGTGCACC CCAATTTCAA GGGAGCGGCA GGCCTTGAGA 4260

AGAGATTCCT CGATGTTACG ACCGATTGCC ATGACTTCTC CAGTCGCCTT CATTTGTGTA 4320

CCGAGACGGC GTTCACCCTT TTCAAACTTG TCAAATGGGA AACGTGGAAT CTTAGCAACT 4380

ACGTAGTCAA GGGCTGGTTC AAACATGGCA TAGGTTGAAC CTGTAACTGG GTTTATAACC 4440

TCATCCAAGG TCAAACCTAC TGCAATCTTG GCAGCCAACT TAGCAATCGG ATATCCTGTC 4500

GCTTTAGAAG CAAGGGCTGA CGAACGTGAT ACACGAGGGT TTACTTCGAT AACATAATAC 4560

TTGAAGCTGT TAGGATCAAG AGCTAGCTGA ACATTACATC CACCTTCAAT CTTGAGGGCA 4620

CGAATAATGC TCAAGCTCGC ATCACGAAGC ATTTGGTTTT CATAGTCTGA CATGGTTTGC 4680

GCAGGGGCAA ATACAATGGA ATCCCCTGTG TGAATCCCAA CTGGGTCAAA GTTTTCCATG 4740

TTACAAACAA CCAAGGCATT GTCAGCTGAG TCACGCATCA CTTCGTATTC AATTTCCTTG 4800

AAACCGGCAA TCGAACGCTC AATCAAACAT TGGGTAACAG GTGACAATTT CAAACCATTT 4860

TCAGTGATTT CACGCAATTC TTTCTCGTTG GCACACATAC CACCACCAGT ACCACCAAGG 4920

GTAAAGGCTG GACGAACGAT GACTGGGTAG CCAATTGTCG CTGCAAAGGC AACTGCTTCT 4980

TCTACTGTGT TAACAATTTC AGATTCTGGA ATGGGTTGTT CAAGCTCTTC CATCAATTGT 5040

TTAAAGAGGT CACGGTCCTC CGCTTGGTCA ATGGCAGATA ATTTGGTACC CAGAAGTTCA 5100

ACGCCAAGCT CGTCTAGGAT ACCATTTTTA GATAATTCCA TGGCCATGTT GAGACCTGTC 5160

TGACCACCGA GTGTTGGTAG CAAGGCATCT GGACCTTCCT TACGAAGAAT ACGTGTCACA 5220

AACTCAAGTG TAATCGGTTC AATGTAAACC TTGTCAGCAA TTTCCTTGTC CGTCATGATG 5280

GTTGCAGGAT TTGAGTTAAC CAAAACAACC TCATAACCTT CCTCTTTCAA CGACAAGCAA 5340

GCCTGAGTCC CAGCGTAGTC AAACTCAGCA GCCTGACCAA TAATAATCGG ACCAGAACCA 5400

ATCACCATAA TTTTTTGAAT ATCAGTACGT TTAGGCATAT ATAAGATATT AAGGGTGTCA 5460

AGCGGACAAA GCTAAAATAG GAGTTATGAC GAAGAACTGT CAGTTCTAGG AATAACTATC 5520

TTTTTAGCAC CGTCCGTAGC CCGTATTCAG TTCAGCAAAT ACGGAGCACC CTTCTCCTTT 5580

CTATTCGTCG CCTCTCAGGG CGACATTAAA TAAGATACAA AGGACGAATA GAAAGCGATT 5640

GAATTTTAGG AAATCAAGGA AGGATTGACA ATCCAAGTTG GTTTCTCTAC ATTCTGAGCT 5700

TTCCGTCCGT GTTCAGTTAC ATAAATTCTC CGACGAGCTT TTACTCGTTC TTAGTTTGAT 5760

TGTTTAAAAA CTTCCATCAT CTCGATAAAC TCGTCAAATA GGTAGCTAGC GTCGTGTGGC 5820

CCAGGAGCTG CATCTGGGTG GTATTGAACA GAGAAAGCAG GTTGGTATCT GTGGCGCACA 5880

CCTTCCACTG ACTTGTCATT GATTTCTTCG TGGGTAATAA TCAAGTGCTC TGGCAAATCC 5940

TCGCGGCTGA CTGCATAACC ATGGTTCTGG CTGGTGAAGT CTACTCGTCC TGTTGCGATT 6000

TCACGTACCG CATGGTTGAA TCCACGGTGG CCAAACTTCA TCTTATAGGT CTTAGCCCCG 6060

TTTGCCATTG CAAAGAGTTG GTGTCCCATA CAAATACCAA AGATTGGAAT TTTTCCTTGT 6120

ACACCGCGAA TCATGTCGAG TGCTTGTGGA ACGTCTTCTG GGTTACCTGG ACCATTTGAC 6180

AACATAACTC CGTCAGGATT GAGATGGAGA ATTTCTTCAG CCGTTGTCGA ATAAGGAACA 6240

ACTGTCACGT TACAGTTGCG TTTAGAAAGT TCACGTAGGA TTGAGTGCTT GAGACCAAAG 6300

TCCACTAGCA CCACGCTCAA ACCAACTCCT GGAGCTGGAT AAGACGTTTT AGTAGAAACC 6360

TGTTTGATAT TGTCTGTCGG TAAAACTGTT GCTTGGAGCT GGTCCGTCAC ATGGTCCATA 6420

CTGTCCCCAA CATGGGTCAA GGTTGCACGC ATAGTACCAT GCTTACGGAT AATCTTGGTA 6480

AGAGCACGCG TATCAATTCC TGAAATCCCT GGAATTTTCT TGGCTTTCAA AAATTCATCC 6540

AAGGTCATTT GGTTGCGCCA GTTGCTAGCT CTACGCGCTT CTTCAAAAAC AACGACTCCC 6600

TTACAAGTTG GAATAATGGA TTCATAATCA TCACGATTAA TACCATAATT TCCTACCAAA 6660

GGATAAGTAA AGGTCAAGAT TTGTCCATTA TAAGACTGGT CTGTAATGGA TTCTTGGTAG 6720

CCGGTCATCC CTGTATTAAA GACGATTTCG CCTGTTACAT CAATATCTGC TCCGAAGGCC 6780

TTGCCTTCAA AAACTGTGCC ATCTTCTAAT ACTAGAATTC TTTTTGTCAT ATTTTCACCT 6840

CTCGTGGACG CTCACTGGCG TCTTTTAACG TCTTGTGTTT TAGTTGGCGT TTCTACTCGC 6900

TAGTACGGAT TCTAAGATTG CCATTCGAAC AAAGACACCA TTGGTCATTT GTTGGACAAT 6960

CCGTGATTTT GGTGCTTCAA CCAAGTGGTC TGCTATTTCT ACATCACGAT TGATTGGAGC 7020

TGGGTGCATG AGGATTGCTG TTTCTTTCAA ACGATCGTAA CGTTCTTGAG TCAAGCCATG 7080

TTGGGCATGG TAGTCTTCTT TTGAAAATAC AGCTCCACTA TCATGGCGTT CGTGTTGCAC 7140

ACGGAGAAAC ATCATGACAT CAACCTGATC AATGATTTCA TCAATGGTTA CAAACTGTCC 7200

ATAGTCTGCA AACTCTTGAC TTCTCCATTC CTCAGGTCCA GCGAAAAAGA GTTCAGCTCC 7260

CAAGCGTTTC AAAATCTGCA TATTGGATTT GGCAACGCGT GAGTGGTCCA AGTCACCTGC 7320

AATAGCAACT TTAAGACCCT CAAAGTGGCC AAATTCCTCA TAAATGGTCA TCAAATCAAG 7380

CAAGCTCTGG CTAGGGTGTT GGCCCGAACC ATCTCCACCA TTGATGATGG AAGTCGTAAT 7440

CGTTGGACTA GCAATCAATT CTCTATAGTA GTCGACCTCT GGATGGCGAA TCACACAGAC 7500

ATCCACTCCT AAAGCAGACA GAGTCAAAAT GGTGTCATAA AGTGTCTCAC CCTTATTAAC 7560

CGAGCTAGTC TTCACATCAA AGTCAAGTCG TTCCAATCCA AGTTTAATCT CTGCGACTTC 7620

AAAGGACTTA TGTGTCCGTG TAGAATCCTC AAAGAAGAGA TTGGAAACAA TCGGATGGTC 7680

TTCATAGGGA AGCTGGGCTC CATTTTTAAA CTCAATTCCT CGCTTGATCA ATTTCATTAC 7740

TTGATCGACA GTGAGGTCTT CCATGGACAC CACATGGTTC AATGCTTGTT GATTTTCTGA 7800

CATGGCTACT CCTTTAACTT TCTAAGCTTC TTCAGTAATC AGAACTCTGT CTTGGTCATC 7860

AAGTTCTGTC ATCTCTACGA TGATTTCTTC AGAACGACTG GTTGGGATAT TTTTTCCAAC 7920

GTAATCTGGA CGGATTGGCA ATTCTCTATG TCCACGATCG ACTAGAACTG CTAAACTCAC 7980

ACGCGCAGGA CGACCATGAC CGACAATATT ATCAATAGCA GCACGGATGG TACGACCTGT 8040

ATAGAGCACA TCATCCACCA AGATAACTTC GCGGTCTGTC ACATCGACAG AAACCAAAGA 8100

AGTATCTTCT CCACTTTTAA CATCATCACG GAAAGGTTTA GTATCCAATT CCACAACAGG 8160

AACTGAAAGA TTTTCTAACT GCTTCAAACG TTCTTGGATT CGGTGGGCAA TAAAGACACC 8220

ACGAGTTTTA ATACCAGCCA AGACGATCTT ATTCAAATCT TTGTTGCGTT CGATAATCTC 8280

ATAAGTAATA CGCGTAATCG CTCGTTTGAC GGTCAATTCG TCTACAACTT CTTTTGTTTT 8340

CATGACAAAC CTCCAAAAAG AAAAGTCTCC TTAAACAAGG AGACTTGAAA TTTATAGCCA 8400

AGCGAGCCCT ACTGCACACA GTATAGACTT CACCCTTCTA CTTTATCGCG CTCCTTGCCT 8460

GCCTCACGGG ACAGGTTTAA AGGAATATTT AGTTATCATT TACTATAGCA CAAAGCATGC 8520

TTAAAATCAA GCAAAAAGTT TCAATGTAGC ATCTTACAAA TTGCTAAAAT CATATAATTG 8580

TGGGTACTGG TCACACTCTG GATTTTTTGG ATGGCAAATG GCTCTTCCAA AATAAATCAT 8640

GGCCTGATGG GCAGCTAACC ACTGCTCAGG CGGCAAGATA TCCATGACCC GCTTTTCCAC 8700

CTCAAGTGGC GTCGCTGATT TTTTGACAAT ATCGTGGTGT TTGCAAATAC GCTCCACATG 8760

AGTATCCACT GCAAAGGCTG GAATTCCAAA TCCTACACTC ATGACAACAT TGGCTGTCTT 8820

GCGACCAACA CCTGCCAAAC TCTCCAATTC TTCACGTGTC TGAGGGACTT GACCATCAAA 8880

ATCGTCTAGT AACTGTTGGG CACATTTTTT AAGGAATTTA GCTTTATTCC GATACAATCC 8940

CAAGCGAGAA ATATGTGAAG CAATCTCACT CTCTGTCGCT ACAGACATAG CTTGGGGTGT 9000

TGGAAAGGCA ACAAAGAGAC CTGGTGTGGC CTTATTTACC GCTGCATCTG TCGTCTGGGC 9060

TGATAACATG ACCGCAACCA GGAGTTCAAA ATGATTGGTA AAATCAAGAC TAGGCTTGGC 9120

ATCTGGGAAG AGGGCAATGA TTTCTTCTAG CACCTTTCGT GCTCGTTTTT TTGACAAGAC 9180

CATTATTCAT CTCCGTCAAA TAGTCCTTGT AAGCCAGCAA AAGGACTGTT TTCTTCTTTC 9240

TTTACTGCTT TTTGAGCTTG GTATTCTTCC TCTGTCATGA TTTGCCAGTC ATTTCCTGAG 9300

ATAAATCCTT GACCAGCTTC TTCTTCAGCC GTCAAGACCT TGATAGGAAT GTTTAGCAGG 9360

ATATTGTCTG ATACACTCTC AGCAAGGTCA AGCTCCCCAT TTTCGATGGG CAAGACCAAG 9420

TCATCATCTA AAACTTCTTG ATCTAGCTGG TTAGTTGCGC CTTCCATGAA AACTTCCGTG 9480

ACTGGATAAG ATTCAACTAA CTCAACTGGC TCCATACTGC GACTCGACGC AAGAACAATG 9540

GTATAAGATA GTTGATAATC TAAGAAATAC ATACGGTCTT CATATTGTAC TTTCCCAACT 9600

GCAAGGATAT CTTTTACATC TAAAATTTCT TGATTACGTG CACGCAGGTC ATCAACTAAA 9660

TCTAACGTTT GTTCAAAGTT CAAACCTTCA GACTGCTTAC GAATTTCTTG AATATTTAAT 9720

TTCATACTTC CTCCATAAAG ATTTACTCTC TTGATTATAC CATGAAAAGG CTACAAATCA 9780

GCACACCAAA CTTTGTAATT AAAATTCAAA ATTTTAACAT ATTTACTATG ATAGTTTTAT 9840

TTTTTAGTGC TATACTATAG GGAAAGAGTA CATCAGATCA AGGAGGATGC TCACATGGAA 9900

GACAAGAAAC TCATTCAACT CCTATCCAAG TTAAATAAAA GCTACCAAAA CTGTAAACAG 9960

GGTACGGCAG ATGATATTCG ACTACAAGAG CTGCTAAACA CTACTATGCA AGAGCTCAAA 10020

AAAACGGAAC AGTTGAACAA CAGTATCTTA ATTGATCTTG AGAAATTTTA CCAACCTACC 10080

AGTCTTCTGA TTGGACTGGG TAGCCTAAAA CTAAACGATC AAGCACGCAC TGCTTGGCGA 10140

AACTATGATA AATTCCATTA CGATCATGTC AAACACGTAC TAAGTCTCTA TGGACCTGTT 10200

TTTGAATTTT AGAGCATAGA ATTTCCAGTT TTCTGTTGAC AAAATTTCCT TAAAGGTATA 10260

ATATAAAGAT ACTAATACTC GGAGGTAAGG GAGACATGAA CAACTAAGTC TATCAAATAA 10320

AGAACCTTTA TTTAGTAGAT CTTGTTTTTG TCTCTTTTTG TGTGCTCTTT TATGCTCTTT 10380

TTCTGGCATG TTAATAGAGT TTTTTTGACA TAGACTTTGG GCTCTACTAG GTAAAGTAGA 10440

GCTTTTTGTT ATGCACTATG AACATTCTAG AAAGGGAAAT CATATGATAA AAATCAATCA 10500

TCTAACCATC ACACAAAACA AAGATTTACG AGATCTTGTA TCTGACCTAA CCATGACCAT 10560

CCAAGACGGG GAAAAGGTTG CTATTATTGG TGAAGAAGGA AATGGCAAAT CAACCTTACT 10620

TAAAATTTTA ATGGGGGAAG CTTTGTCTGA TTTCACTATC AAGGGAAACA TCCAATCTGA 10680

CTATCAGTCA CTGGCCTACA TTCCTCAAAA AGTCCCTGAG GACCTAAAAA AGAAAACTTT 10740

ACACGACTAC TTCTTTTTAG ATTCTATTGA TTTAGACTAC AGTATCCTCT ATCGTTTGGC 10800

GGAGGAATTG CATTTTGATA GCAATCGTTT CGCAAGTGAC CAAGAGATTG GCAATCTATC 10860

AGGGGGCGAA GCTTTGAAAA TTCAGCTTAT CCATGAGTTA GCCAAACCCT TTGAGATTCT 10920

ATTTTTAGAT GAACCTTCAA ATGACCTAGA CCTTGAGACA GTTGATTGGC TAAAAGGCCA 10980

GATTCAAAAG ACCAGGCAAA CCGTTATTTT CATTTCCCAT GATGAAGACT TTCTTTCTGA 11040

AACGGCAGAC ACTATTGTTC ACTTGCGACT GGTCAAACAC CGTAAAGAAG CGGAAACGCT 11100

AGTAGAGCAT TTAGACTATG ATAGCTATAG TGAGCAGAGA AAGGCTAATT TTGCCAAACA 11160

AAGTCAGCAA GCTGCTAACA ACCAAAGAGC CTACGATAAA ACCATGGAAA AACATCGGAG 11220

AGTTAAGCAA AATGTAGAAA CTGCGCTTCG AGCTACCAAA GATAGTACTG CCGGTCGCCT 11280

ATTGGCTAAA AAGATGAAAA CTGTCCTCTC ACAAGAAAAA CGCTACGAAA AGGCAGCTCA 11340

GTCCATGACT CAAAAGCCAC TTGAAGAGGA ACAAATCCAA CTTTTCTTTT CAGACATCCA 11400

ACCATTACCA GCTTCTAAAG TCTTAGTCCA ACTGGAAAAA GAAAATTTGT CCATTGACGA 11460

CCGAGTTTTG GTTCAAAAAC TACAACTAAC TGTCCGTGGC CAAGAAAAAA TCGGTATTAT 11520

CGGGCCAAAT GGTGTTGGGA AATCAACTCT GTTAGCCAAG TTACAGAGAC TTCTGAATGA 11580

TAAAAGAGAG ATTTCACTTG GTTTTATGCC ACAAGATTAC CACAAAAAAC TGCAATTGGA 11640

TTTATCCCCA ATAGCCTATC TCAGTAAAAC TGGGGAAAAA GAGGAACTAC AGAAAATCCA 11700

ATCTCACCTA GCTAGTCTCA ATTTCAGTTA TCCAGAAATG CAGCATCAAA TTCGCTCCTT 11760

ATCTGGCGGA CAACAGGGAA AACTCCTGCT TTTGGATTTA GTCCTGCGCA AACCAAACTT 11820

TCTCCTGCTG GATGAACCCA CACGAAACTT TTCTCCCACT TCTCAACCCC AAATCAGAAA 11880

ACTCTTTGCT ACCTATCCAG GCGGTCTCAT CACTGTTTCG CATGACCGTC GTTTCTTAAA 11940

AGAAGTCTGC TCGATCATCT ATCGCATGAC AGAACACGGT TTGAAGCTAG TTAATTTAGA 12000

AGATTTATAA ATTTGCAACA TAGCAAAAAT CCAGAGACGA CCTCTGGATT CTTTTACATC 12060

TGTTTTAAAC GTTCAATCCG TTCTGAGATA GGTGGGTGGG TATAAAAGAG TTTTTGGAAC 12120

CCCCCACCTT TCTTAGGATC ATTGATATAA AGGGCACTGC TAGCATCATC GACGTGGCGA 12180

CTCATAGGTT TGCTATTGTC CAACTTATCT AGGGCATTAA TCATTCCCTG GGGATTGCGA 12240

GTCAGCTCGA CACTAGATGC ATCTGCCAGA AATTCCCTCT GACGAGAAAT AGCGAGCTGA 12300

ACCAAGGTTG CAGCGAGAGG TGCCAGTACA ATAGCTAGTA GGGAAACCAC TAGCATAATG 12360

ATTTCAAGAC CATTTCCATC TCGGTCATCA TCACTTCGTC TGCGACCTGC TCCACCCCAC 12420

CACATCATAC GACCTGCCAT ACTAGAAAGC ATGGTGATAG CACTAGCAAG GGCAACTGCA 12480

ATAGTCGAAA TACGGATATC ATAATTACGA ATATGACTGA CTTCATGTCC CATAACAGCT 12540

TCTAGTTCTT CACGATTCAT GATAGCTAGT AGACCTGAAG TCGCAGCAAC AGCCGCATTT 12600

TGAGGATTAG AACCTGTCGC AAAGGCATTT AAGGCTGGAT CATCAATGAT GAAAACACGG 12660

GGCATAGGAA TCTGAGCGAC CAGAGCCATA TCTTCCACTA CATGGTAGAG GTCTGGTGCC 12720

GTTTGCTCAT CCACCTCACG CGCTCCATTC ATGGACATGA CAATCTCTGT CGATTGAAAA 12780

ATCATAGACA AAGCGTAGAT AAAGCCGATA ATCAGTGCAA TAACCAAACC ACCAAGTCCA 12840

GATCTTATAA AGAGATAACC AACCGCATAA CCAACAAGAG CTAAGAGTAG GAAAAATACC 12900

AGCAACAAAA TCCAGGTTTT TCGTTTATTG CTTGCAATTT GATCAAACAA CATCTTAGTC 12960

ACCTAAACCG CTAAAATCAA CTTTAGGAAC CGACTTTTCC TCTTCAGGTG TTTGAAGGAA 13020

ATCTGCCGCT TTAAATCCAA ACATTCCAGC GATAATATTG CTCGGGAAAG TTTCTAATTT 13080

TACATTGTAG TTGCTGACAA CACTGTTATA GAGTTGACGA GAGTAAGAAA TTTTATTTTC 13140

TGTGTTTGTC AACTCCTCTT GCAATTTAAC AAAGTTAGCA CTAGCTTTCA AATCTGGATA 13200

GCTTTCTGCA ACTGCAAAAA TACCTGAAAC CTGACGAGTG AGGGCATCAC TGGCTTTCAT 13260

AGCTTCTGCT GGTGAAGTCG CTGCCGCCAC TTGGTTACGT AGTTCTGCCA CCTTTTCAAG 13320

GGTAGAACCT TCATATTTGG CATAACCTTT TACAGTCTCA ATCAAGTTTG GCAAGAGGTC 13380

ATTGCGACGT TTCAACTGAA CATCAATCTG ACTCCAAGCC TCCTTGGTTT GCATACGATT 13440

TTTAACCAAA CCGTTATAGC TAACAATCAC AAAAATAACA ATAAGAGCGA TAACTCCAAG 13500

AATAATCCAA GTCATAATAT AAGTCCTTTC TGCTTTTAGA TTAGTACCAG TATATCAAAT 13560

TTTCTATGAT TGTGGTAAAA TAAGATGATA CTAAAGAAGG AAATAACTAT GAAACCAAAA 13620

ACATTTTACA ACTTGCTTGC CGAGCAGAAT CTTCCACTTT CGGACCAGCA AAAAGAACAA 13680

TTTGAACGTT ATTTTGAGCT CTTGGTCGAG TGGAATGAGA AGATTAATTT GACGGCGATT 13740

ACGGACAAGG AAGAAGTTTA TCTCAAACAT TTTTACGATT CGATTGCACC CATTCTTCAA 13800

GGTTTGATTC CCAATGAAAC TATCAAACTT CTTGATATCG GGGCTGGGGC AGGATTTCCT 13860

AGTCTACCAA TGAAAATTCT CTATCCGGAG TTAGATGTGA CCATTATTGA TTCACTCAAT 13920

AAGCGCATCA ACTTCCTACA ACTCTTGGCT CAAGAACTGG ATTTGAACGG AGTTCATTTC 13980

TACCACGGAC GTGCCGAAGA TTTTGCCCAA GACAAGAACT TCCGTGCTCA ATATGATTTT 14040

GTAACAGCTC GTGCGGTTGC CCGTATGCAG GTCCTATCTG AATTGACTAT TCCCTACCTT 14100

AAGGTTGGTG GCAAACTATT AGCACTCAAG GCTAGCAATG CGCCTGAGGA ATTATTAGAA 14160

GCTAAGAATG CCCTCAATCT CCTTTTTAGT AAGGTCGAAG ACAATCTCAG TACGCCCTAC 14220

CGAATAGAGA TCCGCGCTAT ATCACAGTGG TAGAAAAGAA AAAAGAAACA CCAAATAAAT 14280

ATCCACGTAA GGCTGGTATG CCAAATAAAC GCCCACTTTA AATTTTTTAG TAAACAAATG 14340

TTTACAAAAT CAGCCTCGCT CTTTTATTTC TAGGCTCGGG AAAAAATGAT TTACAAAATC 14400

AGCCTCGCTC TTTTATTTCT AGGCTCGGGA AAAAATGATT TACAAAATCA TTTTTTTCTG 14460

CTATACTATC CTAAGCAAAG GTTTTTAATG TCATCCCGTG AGGTGACGAA GACGCAGAAA 14520

TATTTAAAAC TCTTTAAAAT CTAAATTTTA AAGAAGTCTT ACTCTGAGGG CCTATTGCTG 14580

TAAAATAATG GGCTCTTTTT TGATGCCCAA AAGTGAGGTT TATATGAAAC AAGAATCAAC 14640

TGTTGATTTG TTAC 14654

(2) INFORMATION FOR SEQ ID NO: 107:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 6405 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 107:

AGAAAAATCT GCTTTACAGA AAATAAAAAT AATAGGAGAA AATCTATGTC AGATTTGAAA 60

AAATACGAAG GTGTCATTCC AGCCTTCTAC GCATGTTATG ATGATCAAGG AGAAGTAAGC 120

CCAGAACGTA CGCGTGCCTT GGTTCAATAC TTCATTGATA AAGGTGTTCA AGGTCTTTAT 180

GTCAATGGTT CTTCTGGTGA ATGTATCTAC CAAAGCGTTG AAGATCGCAA GTTGATTTTG 240

GAAGAAGTCA TGGCGGTAGC AAAGGTAAAT TGACCATTAT TGCCCATGTT GCTTGCAATA 300

ATACTAAAGA TAGTATGGAA CTTGCTCGCC ATGCTGAAAG CTTGGGAGTA GATGCTATTG 360

CAACGATTCC ACCAATTTAT TTCCGCTTGC CAGAATACTC AGTTGCCAAA TACTGGAACG 420

ATATCAGTTC TGCAGCTCCA AACACAGACT ACGTGATTTA CAACATTCCT CAATTGGCAG 480

GGGTTGCTTT GACTCCAAGC CTTTACACAG AAATGTTGAA AAATCCTCGT GTTATCGGTG 540

TGAAGAACTC TTCTATGCCA GTTCAAGATA TCCAAACCTT TGTCAGCCTT GGTGGAGAAG 600

ACCATATCGT CTTTAATGGT CCTGATGAGC AGTTCCTAGG AGGACGCCTC ATGGGGGCTA 660

GGGCTGGTAT CGGTGGTACT TATGGTGCTA TGCCAGAACT CTTCTTGAAA CTCAATCAGT 720

TGATTGCGGA TAAGGACCTA GAAACAGCGC GTGAATTGCA GTATGCTATC AACGCAATCA 780

TTGGTAAACT CACTTCTGCT CATGGAAATA TGTACGGTGT CATCAAAGAA GTCTTGAAAA 840

TCAATGAAGG CTTGAATATT GGATCTGTTC GTTCACCATT GACACCAGTG ACTGAAGAAG 900

ATCGTCCAGT TGTAGAAGCG GCTGCTGCCT TGATTCGTGA AACCAAGGAG CGCTTCCTCT 960

AATCTAAAAG GAGGTATTTA TGACATATTA CGTTGCAATT GATATCGGTG GAACCAACAT 1020

CAAGTATGGT TTGGTTGATC AAGAGGGGCA ACTTCTTGAA TCGCATGAAA TGCCAACTGA 1080

GGCGCATAAG GGTGGACCTC ATATCTTACA AAAGACCAAA GATATCGTAG CTAGTTATTT 1140

AGAAAAAGGC CCAGTAGCAG GTGTTGCCAT ATCTTCTGCT GGGATGGTGG ATCCGGATAA 1200

GGGTGAGATT TTCTATGCTG GGCCGCAAAT CCCTAACTAC GCAGGCACCC AGTTCAAAAA 1260

GGAAATCGAA GAAAGCTTTA CTATTCCTTG TGAGATTGAA AATGATGTCA ACTGTGCAGG 1320

TCTTGCTGAG GCAGTATCTG GTTCAGGCAA GGGAGCAAGT GTGACACTTT GCTTGACCAT 1380

TGGAACCGGT ATCGGTGGTT GCTTGATTAT GGATAGGAAA GTCTTCCATG GTTTTAGCAA 1440

TTCAGCCTGT GAAGTCGGGT ATATGCATAT GCAGGATGGA GCTTTTCAAG ACTTGGCTTC 1500

TACAACAGCT TTAGTGAAAT ATGTAGCTGA AGCCCATGGA GAAGATGTTG ATCAGTGGAA 1560

TGGCCGTAGA ATTTTCAAAG AAGCCACTGA AGGAAACAAA ATCTGCATGG AAGGTATTGA 1620

CCGTATGGTT GACTATCTAG GAAAAGGTCT GGCAAATATT TGCTACGTTG CCAATCCAGA 1680

AGTGGTTATT CTTGGTGGTG GTATCATGGG GCAAGAGGCT ATCCTCAAAC CTAAGATCCG 1740

TACAGCCTTG AAAGAGGCTT TGGTACCAAG TTTAGCAGAA AAAACACGAT TAGAATTTGC 1800

CCATCACCAA AATACAGCAG GGATGTTGGG TGCATATTAT CATTTTAAGA CAAAACAATC 1860

CTAGTTTGGC TCAGCCAAAC TAGGATTTTC TTACACGTTT TTGTCTACGA TAGCCGTTGA 1920

GTTTTTTATT TTCCCAGTAG CTATTAAAGA TTTTTTCCTT GCTTTCGCGA TTGATTTCCA 1980

AAAAGTAGGC ATAAATCAAA TCGATAAAGA AGAGCATAGG AAGTTGAGCG GATATTCGTT 2040

GGATATAGGA GGGTTGGCTG TGGGTGGCTA CAAGAACAGT CTCTGTATAG GTCTGGCTAT 2100

CTTTATTGGG AACACTTGTA AAGAGTACAG TCTTTGCCCC CATCTCCTTA GCATCTAATA 2160

GACTATCTAA AATAGAAGGA GTTGAGCCTG AAAGTGAGAA GCCCAGTACT AGACAATTTT 2220

CATCCATGAT GCTGGTTGTC CAGGCAAAGC CGTCTTGGTC TGTCAAAGCT TCGCAGACCA 2280

CACCTAGTCG CATAAAACGT AATTTCATTT CACGGGCGAC GAGGCCAGAA CTCCCTGTTC 2340

CAAAGAAGTA GATACGCTCA GCATCTTCGA TTAGCTGGGC AATTCGTTCT AGTTGGATTT 2400

CGTCAATCAA GTCTTGTGTT TGTTCCCTCA TATTGCTATA ACTTCTGAGG ACTCGTTTGG 2460

TCAGTGGACT GTGCTTGGAG ACTTGGTTGG CTTGATTTTC TGCCTGATGT TGGTATTGGA 2520

AAATAAATTC TCGGTAGCCA GTAAAGCCAC ACTTTTTAGC AAAGCGGGTC AAAGCAGCTT 2580

GAGAAATATG TAATTTTTGG GTGACTTGTT GAGAAGATAA ATCATCTGTA ATCGTTTCAG 2640

CTTGCAAAAA ATAGCGAGCG ATTTCTTGTT CTAGGTCTGT CATTTCTTCA AAATGTGAAT 2700

CAATGATAGT TGCGATATCT GGTTTGTCCA TAGGGAAAGC TCCTTTACAT GAGTCATACT 2760

GGAAGACTAG ATCAGAGAAT AGTCACACTT CATTATAACA CATAATATAA GGATAGATAA 2820

ATAAAAACGC ATCTCTGTTT TAAAAACGAA AAAATCGAAA AAGCTTCTCT CTTTTCCATA 2880

ATTTTCTACT CAAATTGTGG TACAATTAAG AGTAAGATTT TAAGTTAGAA ATGAGACTGA 2940

TTTGTATGAG AAAATTTAAC AGCCATTCGA TTCCGATTCG GCTTAATTTA TTGTTTTCAA 3000

TCGTCATTTT ACTCTTTATG ACCATTATTG GTCGTTTGTT GTATATGCAG GTTTTGAACA 3060

AGGATTTTTA CGAAAAAAAG CTAGCTTCAG CTAGTCAGAC CAAGATTACA AGCAGTTCAG 3120

CCCGTGGGGA AATTTATGAT GCTAGTGGAA AACCTTTGGT AGAAAATACG TTAAAGCAGG 3180

TTGTTTCCTT TACGCGTAGC AATAAAATGA CGGCTACAGA CTTAAAAGAA ACAGCTAAAA 3240

AGTTACTGAC TTATGTGAGC ATCAGTTCTC CAAATTTGAC AGAACGCCAG CTGGCGGATT 3300

ACTATTTGGC TGATCCTGAA ATCTATAAAA AAATAGTGGA AGCTCTCCCA AGTGAGAAAC 3360

GCTTGGATTC AGATGGCAAT CGTCTATCCG AATCAGAACT GTATAACAAT GCGGTCGATA 3420

GTGTACAAAC GAGTCAACTA AACTATACAG AGGATGAAAA GAAAGAAATC TATCTTTTTA 3480

GTCAGTTAAA TGCTGTTGGA AACTTTGCGA CAGGAACCAT TGCGACAGAT CCTCTAAATG 3540

ATTCTCAGGT GGCTGTTATT GCCTCTATTT CAAAGGAGAT GCCTGGCATT AGTATTTCTA 3600

CTTCTTGGGA TAGAAAGGTT TTGGAAACTT CCCTTTCTTC TATAGTTGGG AGTGTATCCA 3660

GTGAAAAAGC TGGTCTCCCA GCGGAAGAAG CAGAAGCCTA TCTTAAAAAA GGCTATTCTC 3720

TAAATGACCG TGTAGGAACC TCCTATTTGG AAAAGCAATA TGAAGAGACC TTACAAGGAA 3780

AACGCTCGGT AAAAGAAATC CATCTGGATA AATATGGCAA TATGGAAAGC GTGGATACAA 3840

TTGAGGAAGG TAGTAAGGGA AACAATATCA AACTGACCAT TGATTTGGCT TTCCAAGATA 3900

GCGTGGATGC TTTACTGAAA AGTTATTTCA ATTCTGAGCT AGAAAATGGT GGAGCCAAGT 3960

ATTCTGAAGG TGTCTATGCA GTCGCCCTTA ACCCAAAAAC AGGTGCGGTT TTGTCTATGT 4020

CAGGGATTAA ACATGACTTG AAAACGGGAG AGTTGACGCC TGATTCCTTG GGAACGGTAA 4080

CCAATGTCTT TGTTCCAGGT TCGGTTGTCA AGGCGGCGAC CATCAGCTCA GGTTGGGAAA 4140

ATGGAGTCTT GTCAGGAAAC CAGACCTTGA CAGACCAGTC CATTGTCTTC CAAGGTTCAG 4200

CTCCCATCAA TTCTTGGTAT ACTCAGGCTT ACGGTTCATT CCCTATCACA GCGGTCCAAG 4260

CTCTGGAGTA TTCATCAAAT ACCTATATGG TCCAAACAGC CTTAGGTCTT ATGGGGCAAA 4320

CCTATCAACC CAATATGTTT GTCGGCACCA GCAATCTAGA GTCTGCTATG GAGAAACTGC 4380

GTTCAACCTT TGGCGAATAT GGCTTGGGTA CTGCGACAGG AATTGACCTA CCAGATGAAT 4440

CTACTGGATT TGTTCCCAAA GAGTATAGCT TTGCTAATTA CATTACTAAT GCCTTTGGGC 4500

AGTTTGATAA CTATACGCCG ATGCAGTTGG CTCAGTATGT AGCAACTATT GCAAATAATG 4560

GTGTTCGTGT GGCTCCTCGT ATTGTTGAAG GCATTTATGG TAATAATGAT AAGGGAGGAC 4620

TGGGTGACTT GATTCAGCAA CTGCAACCGA CAGAGATGAA TAAGGTCAAT ATATCCGACT 4680

CCGATATGAG CATCTTGCAC CAAGGTTTTT ATCAGGTTGC CCATGGTACT AGTGGATTGA 4740

CAACTGGACG TGCCTTTTCA AATGGTGCCT TGGTATCCAT TAGCGGAAAA ACAGGTACAG 4800

CCGAAAGCTA TGTGGCAGAT GGTCAGCAAG CAACCAATAC CAATGCGGTG GCCTATGCCC 4860

CATCTGATAA TCCCCAAATC GCTGTCGCAG TGGTCTTTCC TCATAATACC AATCTAACAA 4920

ATGGTGTAGG ACCTTCCATT GCGCGTGACA TTATCAATCT GTATCAAAAA TACCATCCAA 4980

TGAATTAGAA AGGAAATTAT GCTTTATCCA ACACCTATTG CCAAGTTGAT TGACAGTTAT 5040

TCTAAGTTAC CAGGTATCGG GATTAAGACG GCTACGCGTC TGGCCTTTTA TACGATTGGG 5100

ATGTCTGCTG ATGATGTCAA TGAATTTGCA AAAAATCTCC TTTCTGCTAA GAGAGAATTG 5160

ACATATTGTT CTATTTGTGG ACGTTTGACA GACGACGATC CTTGTTCTAT CTGTACTGAT 5220

CCGACTCGTG ACCAGACAAC AATTTTAGTT CTTGAGGATA GTAGAGATGT GGCAGCCATG 5280

GAAAATATCC AAGAATACCA TGGACTCTAT CATGTCCTTC ATGGCCTCAT TTCTCCTATG 5340

AATGGTATCA GTCCGGACGA TATCAATCTC AAGAGCCTTA TGACTCGTCT TATGGATAGT 5400

GAGGTTTCAG AAGTGATTGT GGCGACTAAT GCTACAGCGG ATGGTGAAGC GACTTCCATG 5460

TATCTTTCAC GTTTGCTCAA GCCGGCTGGT ATCAAGGTTA CGCGTCTAGC ACGAGGTCTC 5520

GCTGTGGGAG CGGACATTGA GTATGCGGAC GAAGTGACAC TCTTACGAGC CATTGAAAAT 5580

CGGACAGAGT TGTAAGTGTA GGCAAATTTA CGAACTCCAT TCATTTATAA AAAATCAAAG 5640

AGGCTGAAAA TCGTTCCTAT CGGCCTCTTT TTGTATAGTG TGATGAGTAG GCTCAGGTTC 5700

AAGTTTTAAA AAACCAAGCA AATATGATAT ACTAAAGAGC GAGTATTCTA GTAGAATTAG 5760

GACAAATAAT ATGAAACAAA CGATTATTCT TTTATATGGT GGACGGAGTG CGGAACGCGA 5820

AGTCTCTGTC CTTTCAGCTG AGAGTGTCAT GCGTGCGGTC GATTACGACC GTTTCACAGT 5880

CAAGACTTTC TTTATCAGTC AGTCAGGTGA CTTTATCAAA ACACAGGAAT TTAGTCATGC 5940

TCCGGGGCAA GAAGACCGTC TCATGACCAA TGAAACCATT GATTGGGATA AGAAAGTTGC 6000

ACCAAGTGCT ATCTACGAAG AAGGTGCAGT GGTCTTTCCA GTCCTTCACG GGCCAATGGG 6060

AGAAGATGGC TCTGTTCAAG GATTCTTGGA AGTTTTGAAA ATGCCTTACG TTGGTTGCAA 6120

CATTTTGTCA TCAAGTCTTG CCATGGATAA AATCACGACT AAGCGTGTTC TGGAATCTGC 6180

TGGTATTGCC CAAGTTCCTT ATGTGGCTAT CGTTGAAGGC GATGATGTGA CTGCTAAAAT 6240

CGCTGAAGTG GAAGAAAAAT TGGCTTATCC AGTCTTCACT AAGCCGTCAA ACATGGGGTC 6300

TAGTGTCGGT ATTTCTAAGT CTGAAAACCA AGAAGAACTC CGTCAAGCCT TAAAACTTGC 6360

CTTCCGATAT GACAGCCGTG TCTTGGTTGA GCAAGGAGTG AATGC 6405

(2) INFORMATION FOR SEQ ID NO: 108:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 11309 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 108:

CGAGCTCGGG TACCGGGATT TTAAGGAGTT TGATATGTAT AACCTATTAT TAACCATTTT 60

ATTAGTATTA TCTGTTGTGA TTGTGATTGC AATTTTCATG CAACCAACCA AAAACCAATC 120

CAGCAATGTA TTTGATGCCA GTTCAGGTGA TTTGTTTGAA CGCAGTAAAG CTCGCGGTTT 180

TGAAGCTGTA ATGCAGCGTT TGACAGGGAT TTTAGTCTTT TTCTGGCTAG CCATTGCCTT 240

AGCATTGACG GTATTATCAA GTAGATAAGA AAATAATGGG CAGGACTAGG TCTTTGCCTC 300

TTTTTATTTT TAAAGGATGT TTGAGAAGGT TTTACAGTAA AAGAAAATTA AAAAATCTAG 360

AAAGAAAATA TGAAAGATAG AATAAAAGAA TATTTACAAG ACAAGGGAAA GGTGACTGTT 420

AATGATTTGG CTCAGGCTTT GGGAAAAGAC AGTTCCAAGG ATTTTCGTGA GTTGATTAAA 480

ACCTTGTCCT TAATGGAAAG AAAGCACCAA ATTCGTTTTG AAGAAGATGG TAGTCTGACA 540

TTAGAAATTA AGAAAAAACA TGAGATTACC CTCAAGGGGA TTTTTCATGC CCATAAAAAT 600

GGCTTTGGCT TTGTTAGTCT GGAAGGCGAG GAGGACGACC TTTTTGTAGG GAAAAATGAT 660

GTCAACTATG CTATTGATGG TGATACCGTC GAGGTAGTGA TTAAGAAAGT CGCTGACCGC 720

AATAAGGGAA CAGCAGCAGA AGCCAAAATT ATTGATATCC TAGAACACAG TTTGACAACA 780

GTTGTCGGGC AAATCGTTCT GGATCAGGAA AAACCTAAGT ATGCTGGCTA TATTCGTTCA 840

AAAAATCAGA AAATCAGTCA ACCGATTTAT GTTAAGAAAC CAGCCCTAAA ATTAGAAGGA 900

ACAGAAGTTC TCAAAGTCTT TATCGATAAA TACCCAAGCA AGAAACATGA TTTCTTTGTC 960

GCGAGTGTTC TCGATGTAGT GGGACACTCA ACGGATGTCG GAATTGATGT TCTTGAGGTC 1020

TTGGAATCAA TGGACATTGT ATCCGAGTTT CCAGAAGCTG TTGTTAAGGA AGCAGAAAGT 1080

GTGCCTGATG CTCCGTCTCA AAAGGATATG GAAGGTCGTC TGGATCTAAG AGATGAAATT 1140

ACCTTTACCA TTGACGGTGC GGATGCCAAG GACTTGGACG ATGCAGTGCA TATCAAGGCT 1200

CTGAAAAATG GCAATCTGGA GTTTGGGGTT CACATCGCAG ATGTTTCTTA TTATGTGACC 1260

GAGGGGTCTG CCCTTGACAA GGAAGCCCTT AACCGTGCGA CTTCTGTTTA CGTGACAGAC 1320

CGAGTGGTGC CAATGCTTCC AGAACGACTA TCAAATGGCA TCTGCTCTCT CAATCCCCAA 1380

GTTGACCGCC TGACCCAGTC TGCTATTATG GAGATTGATA AACATGGTCG TGTGGTCAAC 1440

TATACCATTA CACAAACAGT TATCAAGACC AGTTTTCGTA TGACCTATAG CGATGTCAAT 1500

GATATCCTAG CTGGCGATGA AGAAAAGAGA AAAGAATATC ATAAAATTGT ATCAAGTATC 1560

GAACTCATGG CCAAGCTTCA TGAAACTTTA GAAAACATGC GTGTGAAACG TGGAGCTCTC 1620

AATTTTGATA CCAATGAAGC GAAGATTTTA GTGGATAAAC AAGGTAAGCC TGTTGATATC 1680

GTTCTTCGGC AGCGTGGTAT TGCCGAGCGG ATGATTGAGT CTTTTATGTT GATGGCTAAT 1740

GAAACAGTTG CCGAACATTT CAGCAAGTTG GATTTGCCTT TTATCTATCG AATTCACGAG 1800

GAGCCTAAGG CTGAAAAGGT TCAGAAGTTT ATTGATTATG CTTCGAGTTT TGGCTTGCGC 1860

ATTTATGGAA CTGCCAGTGA GATTAGTCAG GAGGCACTTC AAGACATCAT GCGTGCTGTT 1920

GAGGGAGAAC CTTATGCAGA TGTATTGTCC ATGATGCTTC TTCGCTCTAT GCAGCAGGCT 1980

CGTTATTCGG AGCACAATCA CGGCCACTAT GGACTAGCTG CTGACTATTA TACTCACTTT 2040

ACCAGTCCAA TTCGTCGTTA TCCAGACCTT CTTGTTCACC GTATGATTCG GGATTACGGC 2100

CGTTCTAAGG AAATAGCAGA GCATTTTGAA CAAGTGATTC CAGAGATTGC GACCCAGTCT 2160

TCCAACCGTG AACGTCGTGC CATAGAAGCT GAGCGTGAAG TCGAAGCCAT GAAAAAGGCT 2220

GAGTATATGG AAGAATACGT GGGTGAAGAG TATGATGCAG TTGTATCAAG TATTGTCAAA 2280

TTCGGTCTCT TTGTCGAATT GCCAAACACA GTTGAAGGCT TGATTCACAT CACTAATCTG 2340

CCTGAATTTT ATCATTTCAA TGAGCGTGAT TTGACTCTTC GTGGAGAAAA ATCAGGTATC 2400

ACTTTCCGAG TGGGTCAGCA GATCCGTATC CGTGTTGAAA GAGCGGATAA AATGACTGGA 2460

GAGATTGATT TTTCATTCGT ACCTAGTGAG TTTGATGTGA TTGAAAAAGG CTTGAAACAG 2520

TCTAGTCGTA GTGGCAGAGG GCGTGATTCA AATCGTCGTT CGGATAAGAA GGAAGACAAG 2580

AGAAAATCAG GACGCTCAAA TGATAAGCGT AAGCATTCAC AAAAAGACAA GAAGAAAAAA 2640

GGAAAGAAAC CTTTTTACAA GGAAGTAGCT AAGAAAGGAG CCAAGCATGG CAAAGGGCGA 2700

GGGAAAGGTC GTCGCACAAA ATAAAAAGGC ACGCCACGAC TATACAATCG TAGATACGCT 2760

AGAGGCAGGG ATGGTCCTGA CTGGAACTGA AATCAAGAGT GTACGAGCTG CTCGAATTAA 2820

TCTCAAGGAT GGCTTTGCTC AAGTGAAAAA TGGAGAAGTT TGGCTGAGCA ATGTTCATAT 2880

CGCGCCTTAC GAAGAGGGCA ATATCTGGAA CCAGGAACCA GAACGTCGTC GTAAACTCCT 2940

GCTCCATAAA AAGCAAATTC AAAAATTGGA ACAAGAGATC AAAGGGACAG GAATGACCTT 3000

AGTTCCCCTT AAGGTCTATA TAAAAGATGG CTACGCTAAG CTTCTTTTAG GACTTGCCAA 3060

AGGGAAGCAT GACTATGACA AACGGGAGTC TATCAAACGT CGTGAGCAAA ATCGAGATAT 3120

CGCGCGTGTG ATGAAAGCTG TTAATCAGCG ATAAAAAGAG GAATTGAAAA TGGAAAAATT 3180

AGTTGCCTAT AAACGCATGC CTTTGTGGAA TAAACAAACA ATGCCTGAAG CTGTTCAGCA 3240

AAAGCACAAT ACAAAAGTTG GGACTTGGGG GAAAATTACT GTCTTGAAGG GAGCTCTCAA 3300

GTTTATTGAA TTGACAGAAG AAGGGGAAGT TCTAGCTGAA CACCTCTTTG AAGCAGGGGC 3360

AGACAATCCA ATGGCCCAAC CTCAAGCCTG GCACCGAGTG GAAGCTGCCA CAGATGATGT 3420

GGAATGGTAC TTGGAATTTT ATTGTAAACC TGAGGATTAT TTTGCTAAAA AATACAATAC 3480

CAATCCTGTT CATTCAGAGG TCCTAGAGGC CATGCAGACA GTGAAACAAG GGAAAGCTTT 3540

GGATTTGGGT TGTGGTCAGG GGCGTAATTC TCTTTTTCTA GCCCAGCAAG ATTTTGATGT 3600

GACGGCTGTA GATCAAAATG GACTAGCTCT TGAAATCTTG CAAAGCATTG TGGAGCAGGA 3660

AGATTTGGAC ATGCCTGTTG GCCTTTACGA TATCAATTCA GCTAGCATTG AACAAGAATA 3720

TGATTTTATC GTTTCAACAG TTGTTCTCAT GTTTCTACAA GCGGACCGCA TTCCAGCTAT 3780

TATTCAAAAT ATGCAGGAGA AAACCAGTGT TGGTGGTTAC AACCTTATCG TTTGTGCCAT 3840

GGACACGGAG GATTATCCTT GCTCGGTTAA CTTCCCATTC ACCTTTAAAG AAGGAGAACT 3900

GGCAGACTAT TACAAGGATT GGGAATTGGT TAAGTACAAT GAAAATCCAG GCCATTTGCA 3960

CCGTCGCGAT GAGAATGGCA ATCGTATTCA ACTACGCTTT GCGACCTTAC TAGCTAAGAA 4020

AATCAAGTAA ACACACATGA AGATTAGGAA TTTTCCTGAT CTTTTTTCTT TTTTACGAAT 4080

GATATAGAAA AGGAGGGAAT TCATGTTTGT TGCGAGAGAT GCTAGGGGAG AATTGGTAAA 4140

TGTGTTAGAG GATAAACTTG AGAAGCAAGC ATACACCTGC CCAGCTTGTG GAGGCCAGCT 4200

CCATTTGCGT CAAGGACCAA GTGTACGGAC GCATTTTGCC CATAAATCCT TAAAAGACTG 4260

TGATTTTTTC TTTGAAAATG AAAGTCCAGA ACACCTGGCC AATAAGGAAT CCCTCTATCA 4320

CTGGTTGAAA AAAGAGACAA AGGTTCAATT AGAGTACCCG CTTTCAGAAC TTAAACAGAT 4380

TGCGGATGTA TTTGTAAATG GCAATCTAGC TCTAGAAGTT CAGTGTAGTC CCTTGCCTCA 4440

GAAAGTCCTT AAAGAGCGAA GTGAGGGCTA TCGTAGTCAG GGTTACCAAG TACTGTGGTT 4500

GCTGGGTCAA AAACTGTGGC TCAAGGAGCG TTTGACTCGT CTACAGCAAG GTTTTCTTTA 4560

TTTCAGTCAA AACATGGGCT TTTATGTTTG GGAATTAGAC AAGGAAAAAC AAGTTTTAAG 4620

ACTCAAATAC CTGATTTACC AGGATCTCCG CGGTAAACTC CATTATCAAA TCAAGGAATT 4680

TTCCTATGGT CAAGGTAGTT TATTGGAAAT ATTGCGTCTT CCCTATAAGA GACAAAAAAT 4740

ATCTCATTTT ACAGTTTCTG AGGACAAGGA CATCTGTCGC TATATCCGGC AACAACTTTA 4800

TTATCAAAAT CTCTTTTGGA TGAAAGAACA AGCAGAAGCC TATCAAAAGG GAGAAAATAT 4860

CCTGACTTAT GGACTGAAAG AATGGTATCC ACAAATTCGA CCAATAGTGG GCAAATTTTT 4920

CCAGATTGAA CAAGACTTGA CTAGCTATTA TCAGCACTTT TATACCTATT ACCAAAAAAA 4980

TCCTCAAAAT GATTGGCAAA AGCTTTATCC ACCAGCCTTT TATCAGCAAT ATTTCTTGAA 5040

AAATATGGTA GAATAGAAAG GATGGAGGAA TCTAATGGTA TTACAAAGAA ATGAAATAAA 5100

TGAAAAAGAT ACATGGGATC TATCAACGAT CTACCCAACT GACCAGGCTT GGGAAGAAGC 5160

CTTAAAAGAT TTAACAGAAC AATTGGAGAC AGTAGCCCAG TATGAAGGCC ATCTCTTGGA 5220

TAGTGCGGAT AACCTACTAG AAATCACTGA ATTTTCTCTT GAAATGGAAC GCCAGATAGA 5280

GAAGCTTTAC GCTTATGCTC ATATGAAGAA TGACCAGGAT ACACGTGAAG CTAAGTATCA 5340

AGAGTACTAT GCCAAGGCCA TGACACTCTA CAGCCAGTTA GACCAAGCCT TTTCATTCTA 5400

TGAGCCTGAA TTTATGGAGA TTAGCGAAAA GCAGTATGCT GACTTTTTAG AAGCTCAACC 5460

AAAGCTGCAG GTTTATCAAC ACTATTTTGA CAAGCTTTTG CAAGGCAAGG ATCACGTTCT 5520

TTCACAACGT GAAGAAGAAT TATTGGCTGG AGCTGGAGAA ATCTTTGGTT CAGCAAGTGA 5580

AACCTTCGCT ATCTTGGACA ATGCGGATAT TGTGTTCCCT TATGTCCTAG ACGATGATGG 5640

TAAAGAAGTT CAGCTATCTC ATGGGACTTA CACACGTTTG ATGGAGTCTA AAAAACGTGA 5700

GGTTCGCCGT GGTGCCTATC AAGCTCTTTA TGCGACTTAC GAACAATTCC AACACACCTA 5760

TGCCAAAACC TTGCAAACCA ATGTTAAGGT GCAAAATTAC CGTGCTAAAG TTCGTAACTA 5820

CAAGAGTGCT CGTCATGCAG CCCTCGCAGC GAATTTTGTT CCAGAAAGTG TTTATGACAA 5880

TTTGGTAGCA GCAGTTCGCA AGCATTTGCC ACTCTTACAT CGCTATCTTG AGCTTCGTTC 5940

AAAAATCTTG GGGATTTCAG ATCTCAAGAT GTACGATGTC TACACACCGC TTTCATCTGT 6000

TGAATACAGT TTTACCTACC AAGAAGCCTT GAAAAAAGCA GAAGATGCTT TGGCAGTCTT 6060

GGGTGAGGAT TACTTGAGCC GTGTTAAACG TGCCTTCAGC GAGCGTTGGA TTGATGTTTA 6120

CGAAAATCAA GGCAAGCGTT CAGGTGCCTA CTCTGGTGGT TCTTATGATA CCAATGCCTT 6180

TATGCTTCTC AACTGGCAAG ACAATCTGGA CAATCTCTTT ACTCTTGTTC ATGAAACAGG 6240

TCACAGTATG CATTCAAGCT ATACTCGTGA AACTCAGCCT TATGTTTACG GGGATTACTC 6300

TATCTTTTTG GCTGAGATTG CCTCAACTAC CAATGAAAAT ATCTTGACGG AGAAATTATT 6360

GGAAGAAGTG GAAGACGACG CAACACGCTT TGCTATTCTC AATAACTTCC TAGATGGTTT 6420

CCGTGGAACA GTTTTCCGCC AAACTCAATT TGCTGAGTTT GAACACGCCA TTCACCAAGC 6480

AGATCAAAAT GGGGAGGTCT TGACAAGCGA TTTCCTAAAT AAACTCTACG CAGACTTGAA 6540

CCAAGAGTAT TATGGTTTGA GTAAGGAAGA CAATCCTGAA ATCCAATACG AGTGGGCTCG 6600

CATTCCACAC TTCTACTATA ACTACTATGT ATATCAATAT TCAACTGGCT TTGCGGCCGC 6660

CTCAGCCTTG GCTGAAAAAA TTGTCCATGG TAGTCAAGAA GACCGTGACC GCTATATCGA 6720

CTACCTCAAG GCAGGTAAGT CGGACTATCC ACTTAATGTC ATGAGAAAAG CTGGTGTTGA 6780

TATGGAGAAG GAAGACTACC TCAACGATGC CTTTGCAGTC TTTGAACGCC GTTTAAATGA 6840

GTTTGAAGCC CTTGTTGAAA AATTAGGATT GGCATAAAAT GGTTGAATCG TATAGTAAGA 6900

ATGCTAACCA TAACATGCGT CGTCCTGTCG TCAAAGAAGA AATTGTAGAC TTGATGCGTC 6960

AGCGTCAAAA GCAGGTCACA GGTTTCTTGA AAGAATTGGA AGACTTTGCC CGCAAGGAAA 7020

ATATTCCTAT TATTCCCCAT GAAACGGTTG CTTATTTCCG TTTTCTTATG GAAACCATGC 7080

AGCCTAAAAA TATTCTGGAA ATTGGGACGG CTATCGGTTT TTCAGCTCTC TTGATGGCTG 7140

AACATGCGCC AAATGCTAAG ATTACAACTA TTGATCGTAA TCCAGAAATG ATTGGTTTTG 7200

CCAAGGAAAA TTTTGCCCAG TTTGACAGTC GCAAGCAAAT CACTCTCCTA GAGGGAGATG 7260

CGGTGGATGT CTTATCTACA CTGACAGAGT CTTATGATTT CGTCTTTATG GATTCTGCCA 7320

AGTCTAAATA CATCGTCTTT CTGCCAGAAA TCCTCAAACA TTTGGAAGTT GGTGGTGTGG 7380

TTGTCTTGGA TGATATTTTT CAAGGTGGTG ATGTTGCCAA GGATATTATG GAAGTCCGTC 7440

GTGGTCAGCG AACCATTTAT CGAGGCCTTC AAAAATTATT TGATGCAACC TTAGACAATC 7500

CAGAACTCAC CGCAACATTA GTGCCTTTAG GAGATGGTAT TCTCATGCTT CGTAAAAATG 7560

TAGCAGATGT TCAACTGTCT GAAAGCGAAT GATTTTCAGA AAAATTTAAG AAAAAATAGT 7620

AAAATAGATA GAGTAACACT TATCTCAAAG GAGTAGACAT GAAGAAAAAA TTATTGGCAG 7680

GTGCCATCAC ACTATTATCA GTAGCAACTT TAGCAGCTTG TTCGAAAGGG TCAGAAGGTG 7740

CAGACCTTAT CAGCATGAAA GGGGATGTCA TTACAGAACA TCAATTTTAT GAGCAAGTGA 7800

AAAGCAACCC TTCAGCCCAA CAAGTCTTGT TAAATATGAC CATCCAAAAA GTTTTTGAAA 7860

AACAATATGG CTCAGAGCTT GATGATAAAG AGGTTGATGA TACTATTGCC GAAGAAAAAA 7920

AACAATATGG CGAAAACTAC CAACGTGTCT TGTCACAAGC AGGTATGACT CTTGAAACAC 7980

GTAAAGCTCA AATTCGTACA AGTAAATTAG TTGAGTTGGC AGTTAAGAAG GTAGCAGAAG 8040

CTGAATTGAC AGATGAAGCC TATAAGAAAG CCTTTGATGA GTACACTCCA GATGTAACGG 8100

CTCAAATCAT CCGTCTTAAT AATGAAGATA AGGCCAAAGA AGTTCTCGAA AAAGCCAAGG 8160

CAGAAGGTGC TGATTTTGCT CAATTAGCCA AAGATAATTC AACTGATGAA AAAACAAAAG 8220

AAAATGGTGG AGAAATTACC TTTGATTCTG CTTCAACAGA AGTACCTGAG CAAGTCAAAA 8280

AAGCCGCTTT CGCTTTAGAT GTGGATGGTG TTTCTGATGT GATTACAGCA ACTGGCACAC 8340

AAGCCTACAG TAGCCAATAT TACATTGTAA AACTCACTAA GAAAACAGAA AAATCATCTA 8400

ATATTGATGA CTACAAAGAA AAATTAAAAA CTGTTATCTT GACTCAAAAA CAAAATGATT 8460

CAACATTTGT TCAAAGCATT ATCGGAAAAG AATTGCAAGC AGCCAATATC AAGGTTAAGG 8520

ACCAAGCCTT CCAAAATATC TTTACCCAAT ATATCGGTGG TGGAGATTCA AGCTCAAGCA 8580

GTAGTACATC AAACGAATAG TCCAAATCAA TGAGTCAGGG AAAAAACTCG ACTTCAGGAA 8640

AAAATGAAGC AAACATTCCC ACAATAAAAC GCATAGTACA AGGTTTGTAC TGCCCCCCAA 8700

AAAGTTAGAC AATTAATTTA TCCGAAGGAT TTAGTTCTGT ATTGCACAGA GCTAAGTCCT 8760

TTTAGTTTTA TCTTAATTCT CTTATTGTTG TAATAATCAA TATAGTCTAT AATGGCTCGT 8820

TCCAATTGAT TAAGTGATTT AAATGTTTTC TCATAGCCAT AAAACATTTC GGATTTTAAA 8880

ATGCCAAAGA AAGATTCCAT CCTACCGTTG TCTTGGCTGT TGCCCTTACG TGACATGGAT 8940

GCTTGAATTC CCTTACTCTC TAGGAAGCGA TGATAAGAAT CGTGTTGATA TTGCCAGCCT 9000

TGGTCACTAT GGAGAATCGT ATTCTCGTAG TGCTTCTCTT TGAATGCCTG TTCCAACATT 9060

AACGATCAAT CAATTTAATC ATGTACCTAA GATTAGAATT GTTTATCCCA AATTTATTTG 9120

AAAGCTTCTC TAAGCTATAT CCTTGTTTTC TAAGTTCATA GATCTGAACT TTATCATCAT 9180

AAGTTAATTT CATAATAAAA ACACCCCAAA AGTTAGATTT TTTCTGTCTA ACTTTTGGGG 9240

TGTAGTTCAT GTACACCTGA TATGATGCGT TTTATAATTT TAAAGACTTT TTGACCAGCC 9300

TCATTTTTTT AACTTGATAC TCAGTGAAAA GCAAAGATTA AACTAGGAAG CTAGCTGTAG 9360

GCTGCTCAAA GAACAGCTTT GAGGTTGTAG ATAAAACTTG TGAGGTCACC AACATATATA 9420

ATGTGAAGCT GACGTGGTTT GAATAGATTT TAGAAGAGTA TGAGTCTGGA AGTTTTAATG 9480

GATAATGCAA GATTCCATAG AATGGGTAAG CTAGAGTTCT TATGTGAAGA GTTTGGGCAT 9540

AAACTTTTAC CTTTTCCTCC CTACTCATCT TAGTATAGAA AAGTGAATCT GAAATAGTAC 9600

ATAACTGCTT CTAAAACATT CTTATAAATT GATTTAAATT CTCAAATCAT ATTATTCAGT 9660

TCTTATTTCA TTTTGTTCTA CAATCCTGTT GAGAAGACAC GTGTTCATAT CAAAAAGGTA 9720

TTGGCAAGTT GCAATACCTT TTTACGAGGC TCTGTTGTCT TATTTTTGTT TCAACTGACT 9780

ATATCTCCTA TGGTTCTAGT TCAGAAGGCT AGGCTATAAT TATGATTGAT AAGAAGTATC 9840

ATTCCAAGTA TTGGGAGTGA ATGTTTCAAA ATCATGGGTT TCTATAATGG TCAGGCTGGC 9900

ATTTGCTAGA CCGCCATCTT TACGAAGAAG TGGTTCTTTA TAGCCTAGGA GAGTACGAAG 9960

ACTGGCAGTA AGATTGGCGC CGTGTCCGAC AATTAGAATA CGTTCAGCTG GACTATCTTT 10020

TAATGATTTG ATAAATTGGA TGGTCCGTTG AGTTGTACTA TAGAGGGATT CGGCTCCGAA 10080

CATTCGAGTG TCAAATTGAG CAAGATTTGA ACGAAAAGCC TGGATTTGTT GCGGGTAAAT 10140

AGCTTCCAAG GTTGCAATTT TCAAACCTTC TAACTTCCCA AGTTGCCATT CACGGAGATT 10200

AGGAACGATT TCTAAAGAAC AGGGGGTATA GAGTTGACTT TGGATAATCT CAGCAGATTT 10260

GACCGCTCGA GGTAAATCAC TTGAATAAAT CTGATCAAAA GGAATTTCCT TGAGATACTG 10320

800

ACCAAGTCGT TTTAGGGTTT CAATGGATTC AGGAAGAAGA GGAGAATCAC CACTAGCACC 10380

TTGAAAACGA CCTTCTTGGT TCCAGAGGGT ACGACCGTGG CGGACAAAGT AGAGTTTCAT 10440

TACTTGATGT CCTCCAAAAT ATCTACAAAG TCTGCCTTTA CAAAGCTAGC CAAGTCTTGT 10500

GGCGCGACGA TAATGCTGTG TCCGACTTCG CCTGCAGAGA CAATCATTTG ATCCAAATCT 10560

AGAGCAATTT TATCGATAAA AATGGGATAA TTGTGTTTCT GACGAATTCC GACAGGATTA 10620

TTGGCTCCAT GAATGTAACC AGTTGTTTTT TCTAAGTCCT TTTGTGGAAT CATGCTCACT 10680

TTTTTATTGC CAGAAATTTT AGCTAGTTTC TTTTCAGACA AGTGCTGAGT GATAGGGACA 10740

ATTCCGATAA TCGGTCCGGT CTTGTCTCCC AAAAGCGCCA AGGTTTTGAA AATCTGATCT 10800

CGTTCATAAC CTTGAGGAAG CTCTCCTTCT AGGGCATTGA TTTGAATCCC CTGATGAGGG 10860

ATAGCTGCTT TAGATAGGAT TTGTTCCACC AATGTTTTTT TGATTTTAAC TTTTTTTGCC 10920

ATTATTTATA TTTATCCTCC AATTGACTCA TCCAAATACC AAGCCAGATT CCCAGCGCAA 10980

AGAAGAAGGC GATGATGACA TAACCGACAA GTGAAAGTCC TGTGTATTGG ATACTTTCAG 11040

CGTTTCCTGC ATTTGGAATT AAGATCAAAA GGGTACTTGA TAGGACGATA CCGATGATGA 11100

AATGATAGAC GAACTGTTTA CGGAGTTCTT CTAGTTCTCC GTCCGTCCAA GCGTAGGCCA 11160

CTTCTTCTTT CTTGCCTTTA CCTTTGGACA TCTTGTAAAG AGGTGGGAGG GCAATATAGA 11220

CATGACCTGC CTCGACTAGC GGACGCATGT AACGGTAGAA AAATGTCAAG AGCAAGGTCT 11280

GGATATGGGC ACCGTCGGTA TCCGCATCG 11309

(2) INFORMATION FOR SEQ ID NO: 109:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 5548 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 109:

CCATAGTCTA ACAAGTCTTT GTAAAGGTTT ATCCCTGATT CATGTAAAGA TTGTGTAAAG 60

AATCAAAAAA AGCCACTTTT GAAAAATGGC TGCTCCTAAA AATAGCTTTA AAAATTATTA 120

GTCCTGTGCG AAAGATTGGT TAGGAAGAAA AATCGTGAAG CAACTGCCTC TGCCAAGCTG 180

ACTCGTCACC GTGACTTGGC CACCTAATAA TTGACTGAGT TCTTTGACAA TGGCAAGGCC 240

AAGACCAGTG CCACCAGTTT GTCTGCTTCG ACCTTTATTA ACTCGGTAAA AACGTTCAAA 300

AATACGATCC TGCTCTAATT GACTAATACC AATCCCTGTA TCTGATACAG AAATCTTAAT 360

GCCTTCGTTC ACCTTTTGGG TCTTGACCTC AATTTTTCCC CCTTGTTCAG TGTAACGGAT 420

GGCATTGGAT AAAAGATTGA GTAAGATTTG GGAAAGTAAT TGACTATCTG ATACGAGGGT 480

GACATCATCT GGCACCTGCA CCTTTAGCTG TAAATCCTTC TTCTTGAGCT GAGGTTGCAA 540

GCTTTGAGTC AAATCCTGTA CAAATTCTGC CAAAGAAAGG GTCGTCCATT GTATAGGCAT 600

TTGTTGAGCC TTAGATAAGG TAAGAAGATG CTCAACAATA TGCTCAAGAC GCAAACTTTC 660

TTTGTAAATA ATGTCTAGAA AGTCATCCTT GAGCGCTTCT TCTTCAGCTG ACATCCCCTT 720

AATGGTTTCA GCAAAGCCCT TAATCGAAGT AACTGGTGTC CTCAATTCAT GGGAGGCATT 780

TGAGACAAAG GCTAAATTTA ACTTTTCATA AGTTCTAATC GTTGTTAAAT CATATAGCAA 840

GACGAGCACA GCTTCCACAG ATTGGGTGGG GCTAAAAACG GGAACTGCTG TCACTTCTAA 900

AATCAAGTCA CCCTCATGAA ACCCACTTAC TTCTTGTTTT AACCTTGTTT TTTGATCAAA 960

GGCTTGGTGA ACTAAATTCC GAATATCCAT CCGTTTGAGG TCATCAAGTG AACTTATGTC 1020

GCCGTCCACA TCGGGAAAAT AATGAGGCAG AGAGCGACTG GATAATAACA TCTGACCTTG 1080

AGCGGAAACT AAAAACGTCC CCATGGTTAG GTGCGACAGA AGAACCTCCA TTGTTTCGGC 1140

TAGATCCTTG TATTGCTGAT CCTGTTGGGA GACTTTGGTT TTTAGGCCAG ACACATACTG 1200

AGCCAAAGAC TTTAAGTCTT CTTGCCCTTT TTCTAAAAAG TATTCACTAC TGGTCAAGAG 1260

AGGTTGGTGC AAGGTCTCAA AAGCAACTTC CCATTTCCAA AGGCAAAAGA GCCAGTAGCC 1320

ACCTAGTCCC AAAGAAAGGG CTAGAAGAAA GAGACCGATG CCTTTACTGA TCCAAGTTAA 1380

TGCCATCCCT GCAATCAGAA TGAGGCTAAC ACTTAGATTG ACTAGCCAAA ATTGAAGGTA 1440

GCGTTTCATC TATAACTCCT TGAACTTATA ACCATAACCC CGAATGGTTC GAATAAATTG 1500

AGGGGCTTTA GGATTGTCTT CAATTTTTTC CCTCAACTTA CCAATATGAA CGTCCACCAA 1560

ACGTGTTTCC TGCCCAAAGT CATACCCCCA GATACGTTCC AAAAGACGCT CTCTAGTCAG 1620

TGTCATGTTG GGATGTTTCA TAAGATAGAG CAAGAGTTCA AATTCTTTTG GGGTCAAACT 1680

CAGTAACTTA TTCGCCTTGT AGACTTCATG ACGCTCAGGG TATACTTTCA AGGTCCCAAA 1740

TAGCCAAGAA TCGTCAGCGA TATTATCTGA ATCATCTCCT TCTTGTTCTC CTTTAGTTCG 1800

CCTGAGGACA GCCTTGACAC GCGCCAGCAA TTCTCTAGGG CTAAAAGGCT TGGTCAGGTA 1860

GTCATCAGCC CCTAATTCCA AGGCCAAAAC CTTATCAAAT TCATCACTTT TCGCAGAAAC 1920

CATCATAATT GGAGTTTTGA CGCCTTTGGC TCTCAGCCGC TTACAAACTT CCATGCCATC 1980

TAATTGTGGT AACATGATAT CAAGCAAGAT AAAATCAAAG GGTTCTGTTT CTGCCAAAGC 2040

TAAGGCCTTC CGTCCATTTG TCACCAATTG AGTAGAAAAG CCTTCCTTAC TTAAATGGTA 2100

GTCAAGCAAT TTCAGAATGT GTTCTTCATC ATCCACTAAT AAGACTTGTT TTGTCATCTA 2160

TTATCTCCTA TTGGTAACAT TATAACACAA TTATCAGAAA TCCTAACATT GCTAAATCAG 2220

ATTAAATTTG CCTATCAAGA CTAGTATCTG GTCAAACGCT CAATCATCTC CTTGTGCTCT 2280

GGATAGGTCG CCAGTAGATC TACCCTTTCA AATAATTCAA AATCCTCAAA TTCAAAACCA 2340

GGAGCAACAA GACAAGAAAC CAGAGCATCA TCCTTATCAA CTGTTGATCC CCAAATAGTG 2400

CCCTTAGGAA CACAGTAGTG AAGTTGTTGC CCTTTGGATA TGTCCAGGCC TAAAGTGACT 2460

GCTTCGTAGT GACCATCTGC TGTAATCATG TGAACAGTAA GTGGGGATCC TGCATGAAAA 2520

TACCAGATTT CATCTGCTGT CAATCGGTGA AAATGTGAAG GATTCGTTTC TTCTAATAAG 2580

AAATAAATAC TGGTATAAAG CGCCCTTCCC TTACCAGCAA GGTTTATAGT GTCTGAAGCT 2640

TTTTTTGTTT GTCTAAAATA GCCACCTTCA ATATGGGGAG CTAACTCTAG AGTTCTTATC 2700

AAGTCTTCTT TATCCGTCGG AGCCAATGGG TTGAAGTAAC TCTTGTTCAA AGTGGTTTTA 2760

CGATTTCAAG AACTCCTCTC AGTTCTGAGG ACACGGTAAT GATTGATGCG ACGGAAGTAC 2820

AAATCAATCG CCCTAAAAAA AGAATTAGCG AATGATTCTG GTAAAAAAAA TGCCACGCTA 2880

TGAAGGCTCA AGCGATTGTC ACAAGTCAAG GGAGAATTGT TTCTTTGGAT ATCGCTGTGA 2940

ACTATTGTCA TGATATGAAG TTGTTCAAAA TGAGTCGCAG AAATATCGGA CAAGCTGGTA 3000

AAATCTTGGC TGACAGTGGT TATCAAGGGC TCATGAAGAT ATATCCTCAA GCACAAACTC 3060

CACGTAAATC CAGCAAACTC AAGCCACTAA CAGTTGAAGA TAAAGCCTAT AACCATGCGC 3120

TATCCAAGGA GAGAAGCAAG GTTGAGAACA TCTTTGCCAA AGTAAAAACG TTTAAAATGA 3180

TTTCAACAAC CTATCGAAAT CATCGTAAAC ACTTCGGATT ACGAATGAAT TTGATTGCTG 3240

GCATTATCAA TCATGAACTA GGATTCTAGT TTTGCAGGAA GTCTATTATT TGGTTAGGTG 3300

AATTAGTGAA GCGTTTAGGC AAGTGTCTCT GGTTACGACG TCATGGACTC TAAATCGATT 3360

ATATTTAGGG GTCATGACTA GTGAAGCAGT TAGCTAGTTC GCATATAAGC GGCTAGCGTC 3420

TAACAATTAG GAACTTTAGT TCCAATAACT TTAAGATTAC GACGTTTTAG GACATAAATC 3480

GATCATATTT ATGTCCTAAA ACTAGTGAAG CGCCTAGCCA AAGTCCGAAT AGGATTTGGC 3540

GTTAGTTACT TAGATTGCTT TGCAATCAAG TAACTTTGGC GATTTACATC TTCTCTGGCG 3600

CTTCTACTCC AAGCAAGCGA AGGGCTTCTT TGAGAACGAC TGCGGTTGCG TAGCTGAGGG 3660

CTAGACGGCT GTCGCGTTCT GGGCTTTCAT CCAAGATACG TGTATGTGCA TAGTATTTGT 3720

TAAAGGATTG AGCCAGGCTA ATTGCAAATT TAGCAATGAT AGAAGGTTCA AAGTTATCTG 3780

CCGCACGGTT GATAATACGT GGGAAGTCTT GAATGAGTTT AATGATTTCC CAGCTTTCAG 3840

TATCATTCAA GCTATAGTTG CCAGCTGTTT CTGGTTTGAA ATCGGCTTTG CGTAAGATAG 3900

ATTGGATACG AGCGTAGGCA TATTGAACGT AAGGTCCAGT TTCACCCTCG AAGGATACCA 3960

TAGCCTCTAG GTCGAAGTCG TATCCATTTG TACGGTCGGT TTTGAGGTCA TAGAATTTAA 4020

TGGCTCCAAT CCCAACAGCA TGTGCTACTT GGTCTTTGTT TTCTAGTTCA GGATTTTTAG 4080

CCTCGATTTG GACCTTGGCA CGGCTAACAG CCTCTGCAAC AGTAGGCTCT AGCAAGATGA 4140

CATTCCCTTT ACGAGTAGAG AGTTTCTTCC CTTCTTTTGT AACCAAACCA AAAGGAACGT 4200

GAGTAATGTC GTCACTCCAG TCGTAGCCCA TCTCTTGCAA GACAGCTTTG AGCTGTTTAA 4260

AGTGGGCAGA TTGTTCTTGA CCAACGACAT AGATAGATTT AGCAAATTGG TATTCGTTTT 4320

TACGGTAGAG GGCTGCAGCC AAGTCACGTG TGATATAGAG AGTTGCACCA TCAGACTTCT 4380

TGATGAGGGC TGGATGTTCA ATTCCATATT TCTCAAGATT CACAACTTGG GCACCTTCTG 4440

ATTCAAGAAG TAGTCCTTTT TCAGAAAGAA TGTCTACAAC TGCATCCATC TTATCATTGT 4500

AGAAGGCTTC TCCGTTATAG CTGTCAAATT CAACCTTCAA TTCATTGTAA AGGCGGTTAA 4560

ATTCCACTAA ACTTTCATCG CGGAACCATT GCCAAAGAGC GAGAGCTTCC TCATCTCCAT 4620

TTTCAAGTTT ACGGAACCAT TCGCGCGCTT CTTCATCCAA GCTAGGGTCA TTTTCAGCTT 4680

CAGCGTTGAT GCGGACATAG AGTTTAAGGA GTTCATCGAT TGGATGAGCT TTTACAGCTT 4740

CTTCGTCGCC CCATTTTTTG TAGGCAACAA TCAACATCCC AAATTGTTTA CCCCAGTCTC 4800

CCAAATGGTT GACCTTGACC GTTTGATAAC CGATTTTTTG GAAAATATGT GACAAGCTAT 4860

CTCCGATAAC AGTTGAACGC AGGTGGCCAA TAGAAAATGG TTTAGCGATA TTCGGACTAG 4920

ACATGTCGAT AACAACATTT TCTTGTTTAC CAATATTTTG GTCAGCATAG TGTTCTTTTT 4980

CAGTGGTAAC AGCTTGCAAT ACTTGAGCAG AAATGGCAGA TTTATCAAGG AAAAAGTTAA 5040

CGTAAGGTCC TGTTGCGACA ACTTTTTCAA AGGCTTGGCT GTTCATTTTT TCAGCCAGTT 5100

CAGCCGCAAT CATTTGTGGT GCTTTACGTT CGACTTTTGC AAGAGAAAAA GCAGGGAAAG 5160

CAATGTCTCC CATTTCTGAG TTTTTAGGGG TTTCCAGTAA CTTTAAAATA GCCTCTTGGT 5220

CCAGGCTATC AATGATGCTA GATAATTCGC TAGCAATCAA TTCTTTTGTA TTCATTAAGA 5280

GCTCCTTTTT GGACTTTTCT ACTATTTTAT CACAATTTTA AAGAAAGAAG AAAAAATTTT 5340

TGAAATCTCC TGTTTTTTTG GTATAATATG GTTATAAATA TAGTTATAAA TATGCACGCA 5400

AGAGGATTTT ATGAGAAAAA GAGATCGTCA TCAGTTAATA AAAAAAATGA TTACTGAGGA 5460

GAAATTAAGT ACACAAAAAG AAATTCAAGA TCGGTTGGAG GCGCACAATG TTTGTGTGAC 5520

GCAGACAACC TTGTCTCGTG ATTTGCGG 5548

(2) INFORMATION FOR SEQ ID NO: 110:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 3132 base pairs

(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 110:

TACCCGGTAG TCTTAGCAGA CACATCTAGC TCTGAAGATG CTTTAAACAT CTCTGATAAA 60

GAAAAAGTAG CAGAAAATAA AGAGAAACAT GAAAATATCC ATAGTGCTAT GGAAACTTCA 120

CAGGATTTTA AAGAGAAGAA AACAGCAGTC ATTAAGGAAA AAGAAGTTGT TAGTAAAAAT 180

CCTGTGATAG ACAATAACAC TAGCAATGAA GAAGCAAAAA TCAAAGAAGA AAATTCCAAT 240

AAATCCCAAG GAGATTATAC GGACTCATTT GTGAATAAAA ACACAGAAAA TCCCAAAAAA 300

GAAGATAAAG TTGTCTATAT TGCTGAATTT AAAGATAAAG AATCTGGAGA AAAAGCAATC 360

AAGGAACTAT CCAGTCTTAA GAATACAAAA GTTTTATATA CTTATGATAG AATTTTTAAC 420

GGTAGTGCCA TAGAAACAAC TCCAGATAAC TTGGACAAAA TTAAACAAAT AGAAGGTATT 480

TCATCGGTTG AAAGGGCACA AAAAGTCCAA CCCATGATGA ATCATGCCAG AAAGGAAATT 540

GGAGTTGAGG AAGCTATTGA TTACCTAAAG TCTATCAATG CTCCGTTTGG GAAAAATTTT 600

GATGGTAGAG GTATGGTCAT TTCAAATATC GATACTGGAA CAGATTATAG ACATAAGGCT 660

ATGAGAATCG ATGATGATGC CAAAGCCTCA ATGAGATTTA AAAAAGAAGA CTTAAAAGGC 720

ACTGATAAAA ATTATTGGTT GAGTGATAAA ATCCCTCATG CGTTCAATTA TTATAATGGT 780

GGCAAAATCA CTGTAGAAAA ATATGATGAT GGAAGGGATT ATTTTGACCC ACATGGGATG 840

CATATTGCAG GGATTCTTGC TGGAAATGAT ACTGAACAAG ACATCAAAAA CTTTAACGGC 900

ATAGATGGAA TTGCACCTAA TGCACAAATT TTCTCTTACA AAATGTATTC TGACGCAGGA 960

TCTGGGTTTG CGGGTGATGA AACAATGTTT CATGCTATTG AAGATTCTAT CAAACACAAC 1020

GTTGATGTTG TTTCGGTATC ATCTGGTTTT ACAGGAACAG GTCTTGTAGG TGAGAAATAT 1080

TGGCAAGCTA TTCGGGCATT AAGAAAAGCA GGCATTCCAA TGGTTGTCGC TACGGGTAAC 1140

TATGCGACTT CTGCTTCAAG TTCTTCATGG GATTTAGTAG CAAATAATCA TCTGAAAATG 1200

ACCGACACTG GAAATGTAAC ACGAACTGCA GCACATGAAG ATGCGATAGC GGTCGCTTCT 1260

GCTAAAAATC AAACAGTTGA GTTTGATAAA GTTAACATAG GTGGAGAAAG TTTTAAATAC 1320

AGAAATATAG GGGCCTTTTT CGATAAGAGT AAAATCACAA CAAATGAAGA TGGAACAAAA 1380

GCTCCTAGTA AATTAAAATT TGTATATATA GGCAAGGGGC AAGACCAAGA TTTGATAGGT 1440

TTGGATCTTA GGGGCAAAAT TGCAGTAATG GATAGAATTT ATACAAAGGA TTTAAAAAAT 1500

GCTTTTAAAA AAGCTATGGA TAAGGGTGCA CGCGCCATTA TGGTTGTAAA TACTGTAAAT 1560

TACTACAATA GAGATAATTG GACAGAGCTT CCAGCTATGG GATATGAAGC GGATGAAGGT 1620

ACTAAAAGTC AAGTGTTTTC AATTTCAGGA GATGATGGTG TAAAGCTATG GAACATGATT 1680

AATCCTGATA AAAAAACTGA AGTCAAAAGA AATAATAAAG AAGATTTTAA AGATAAATTG 1740

GAGCAATACT ATCCAATTGA TATGGAAAGT TTTAATTCCA ACAAACCGAA TGTAGGTGAC 1800

GAAAAAGAGA TTGACTTTAA GTTTGCACCT GACACAGACA AAGAACTCTA TAAAGAAGAT 1860

ATCATCGTTC CAGCAGGATC TACATCTTGG GGGCCAAGAA TAGATTTACT TTTAAAACCC 1920

GATGTTTCAG CACCTGGTAA AAATATTAAA TCCACGCTTA ATGTTATTAA TGGCAAATCA 1980

ACTTATGGCT ATATGTCAGG AACTAGTATG GCGACTCCAA TCGTGGCAGC TTCTACTGTT 2040

TTGATTAGAC CGAAATTAAA GGAAATGCTT GAAAGACCTG TATTGAAAAA TCTTAAGGGA 2100

GATGACAAAA TAGATCTTAC AAGTCTTACA AAAATTGCCC TACAAAATAC TGCGCGACCT 2160

ATGATGGATG CAACTTCTTG GAAAGAAAAA AGTCAATACT TTGCATCACC TAGACAACAG 2220

GGAGCAGGCC TAATTAATGT GGCCAATGCT TTGAGAAATG AAGTTGTAGC AACTTTCAAA 2280

AACACTGATT CTAAAGGTTT GGTAAACTCA TATGGTTCCA TTTCTCTTAA AGAAATAAAA 2340

GGTGATAAAA AATACTTTAC AATCAAGCTT CACAATACAT CAAACAGACC TTTGACTTTT 2400

AAAGTTTCAG CATCAGCGAT AACTACAGAT TCTCTAACTG ACAGATTAAA ACTTGATGAA 2460

ACATATAAAG ATGAAAAATC TCCAGATGGT AAGCAAATTG TTCCAGAAAT TCACCCAGAA 2520

AAAGTCAAAG GAGCAAATAT CACATTTGAG CATGATACTT TCACTATAGG CGCAAATTCT 2580

AGCTTTGATT TGAATGCGGT TATAAATGTT GGAGAGGCCA AAAACAAAAA TAAATTTGTA 2640

GAATCATTTA TTCATTTTGA GTCAGTGGAA GCGATGGAAG CTCTAAACTC CAGCGGGAAG 2700

AAAATAAACT TCCAACCTTC TTTGTCGATG CCTCTAATGG GATTTGCTGG GAATTGGAAC 2760

CACGAACCAA TCCTTGATAA ATGGGCTTGG GAAGAAGGGT CAAGATCAAA AACACTGGGA 2820

GGTTATGATG ATGATGGTAA ACCGAAAATT CCAGGAACCT TAAATAAGGG AATTGGTGGA 2880

GAACATGGTA TAGATAAATT TAATCCAGCA GGAGTTATAC AAAATAGAAA AGATAAAAAT 2940

ACAACATCCC TGGATCAAAA TCCAGAATTA TTTGCTTTCA ATAACGAAGG GATCAACGCT 3000

CCATCATCAA GTGGTTCTAA GATTGCTAAC ATTTATCCTT TAGATTCAAA TGGAAATCCT 3060

CAAGATGCTC AACTTGAAAG AGGATTAACA CCTTCTCCAC TTGTATTAAG AAGTGCAGAA 3120

GAAGGATTGA TT 3132

(2) INFORMATION FOR SEQ ID NO: 111:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 14672 base pairs

(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 111:

CGAGATTTCT TTAAATGAAC TACGTGAAAT CTACCCATCA TCCAGATCTG GATATTCTCT 60

CCTATCTATA AGTAAAGTTT TAGGAGATTT TAATATAAGT TCTCATGCTT TTAAAGCTTC 120

GGTAAGAGAT TTAAAACCGC TCAGTTTCCC ACTCATTTGC TTCTGGGAGA GTTCTCATTT 180

TATTATTCTT GAAAAAATTA GTAAAAACAA GTTTTATATT TTAGATCCTG CAAAAGGCAG 240

GCAGAGAATG TCAATAAGTG AATTTGAAAG GCATTATTCA AATATCATTT TAACATTTAA 300

AAAGTTAGAT AGCTTTATGT CTCGTAAAGA TAATAAGAAG TCGCCTGTTT TAAAGTATTT 360

TTTTAAGTAT AGGAATAAGC TAGGGATTTT ATTTTTTGTA ACAGCATTAT TGTATGTAAT 420

ACAATCATTA GTACCTATAG CTAATAGATA CATAATTGAC ACGAATTTCA AGGACGATTC 480

GTATTCGTCT AGAATGTTAT TTACTATATT ATTTATATTT ACTGTTTCAT TCTCACTAAT 540

GTATTTATTA AGACAGATAT ATGTTGCATC CTTAAAATAT ATAATGGATA AAGAGATTAG 600

CTATGATTTT ATGAAACATT TGATATATTT ACCTTACAGT TTTTATGAAA AACGTACTTT 660

AGGGGATATA CTTTTTAGAG CTAACTCTAT TGTTTATATA AGAGAAATAC TATCAAATAA 720

TTTTATAGCA GCTATACTTG ATTTGTTAAT GATTGTGGTT TATGCTGTGG TTTTATTTAG 780

CTTTTCTAAG TACATGGTAA TCTTTTTAAT ATCACTAAGT CTAGCTCTAT CTATTGTAAT 840

GTATCCAATC ATAAAAATCT CAAAAAATTT AATTGATAAA AATATAAAAG AAAAGGTTAA 900

TGTTCAAAAT ATTACTTCCG AAGTAATTTC TAAAAATAGT GATATTAAGC TAACTGGAGA 960

AGAGGAATTT TGGATTAACA AATGGGATAA TTTTAATACA AAACAGCTCA TCATAGGTCG 1020

AAAACTTGAT ATACATTTAT CAATTGTTAG TAGTATAACG AATGTTTTAC AAATTATTCT 1080

CCCTGTTTTG ACCCTTATTG TAGGTGTAAA TATAAAAACA TTCGAACAAT TGACGTTAGG 1140

ACAAATTGTA GCAATAAGTA CAGTCTCACC ATACTTTATT TCTCCTATAA TTTCTTTAAG 1200

TGATAACTAT ATACAATTAA TGTTATTAAA GGGATATTTT TTAAGAATAG AGGATGTGTT 1260

TAATACTAAA TCCGAATTAA TTCCAGAAAG AGTCAGTCAA GATATAAAAT TTGATAAAAA 1320

AATAGAATTA AAAGATATTT GGTATAAATA TGGATTATTT GATGATTATG TTTTGAAAGG 1380

AATAAATGTT ACTATTAAAA AAGGAGAAAC TGTTGCTATT GTTGGAGAAT CAGGTTCAGG 1440

TAAGAGTACA TTAGCTAAAA TTTTATTAGG TTTATTAGAA CCTAATATTG GTTCAATAGA 1500

AGTTGATGGA GTAGAAAAAG AAGAAATTGG TCAAACATTG TATAGAAAGA TTTTTGGAGC 1560

AGTGTTACAA AATTCAACCC TAAGTTATGG TACCTTAAGA GAGAATTTGA CATTTGGACA 1620

CTTTGTTTCA GATGAAGAAT TAATGACAAA TCTAAATTCA ATTGGTCTTA GCAATGTAGT 1680

TAAATCTTTA CCTCTTGGAT TAGAGACAAT CATCGCTGAA GAAGGTAATA ACTTTTCTGG 1740

AGGGCAGCAG CAAATGATAC TTTTAGCTCG TTGTCTTTTG TCGAAACCTT CGGTAGTTGT 1800

TTTGGACGAA GCAACAAGTA GTTTAGATAA TTTATCTCAA CAAATTACAA CTTCTTACTT 1860

AAGTGAAATC GGTACCACTA AGATTTTAAT TGCCCATCGA CTAGATACTA TCAAGTCTGC 1920

AGATAAGATC TTAGTAATGC ATAATGGTGA AATTGTAGAG ATTGGGACCC ATAGAGAACT 1980

TCTTGAACTA GGAGGCATTT ATAAGCAATT GTATTCAAAT AATTAGTTTT TGATTAAAAG 2040

GGTAAATTTA TGAAGATTAT GAAAAAAAAA TATTGGACTT TAGCGATATT ATTCTTTTGT 2100

TTGTTCAATA ATTCTGTTAC TGCTCAAGAA ATACCTAAAA ATCTTGATGG CAATATAACT 2160

CACACTCAGA CTAGCGAAAG TTTTTCTGAA TCTGATGAAA AACAGGTTGA CTATTCTAAT 2220

AAAAATCAAG AAGAAGTAGA CCAAAATAAA TTTCGTATTC AAATCGATAA GACAGAATTA 2280

TTTGTAACAA CAGATAAACA TTTAGAAAAA AACTGTTGTA AATTGGAACT TGAACCACAA 2340

ATAAATAACG ATATTGTTAA CTCTGAAAGT AATAATTTAC TAGGCGAAGA TAATTTAGAT 2400

AATAAAATTA AGGAAAATGT TTCTCATCTA GATAATAGAG GAGGAAATAT AGAGCATGAC 2460

AAAGATAACT TAGAATCGTC GATTGTAAGA AAATATGAAT GGGATATAGA TAAAGTTACT 2520

GGTGGAGGCG AAAGTTATAA ATTATATTCT AAAAGTAATT CTAAAGTTTC AATTGCTATT 2580

TTAGATTCAG GAGTCGATTT ACAAAATACT GGATTACTGA AAAATCTTTC AAATCACTCA 2640

AAAAACTATG TCCCCAATAA AGGATATTTA GGAAAAGAGG AGGGAGAGGA AGGAATAATA 2700

TCAGATATTC AAGATAGATT AGGTCATGGT ACGGCTGTTG TAGCTCAAAT TGTAGGGGAT 2760

GACAATATTA ATGGAGTAAA TCCTCACGTT AATATTAACG TCTATAGAAT ATTTGGTAAG 2820

TCGTCAGCTA GTCCAGATTG GATTGTAAAA GCAATTTTTG ATGCTGTAGA TGATGGCAAT 2880

GATATTATCA ATCTTAGTAC TGGACAATAT TTAATGATTG ATGGAGAATA TGAGGACGGA 2940

ACAAATGATT TTGAAACATT TTTGAAGTAT AAAAAGGCTA TTGATTACGC GAATCAAAAA 3000

GGAGTAATTA TAGTAGCTGC ATTAGGGAAT GACTCCCTAA ATGTATCAAA TCAGTCAGAT 3060

TTATTGAAAC TTATTAGTTC ACGCAAAAAA GTAAGAAAAC CAGGATTAGT AGTTGATGTT 3120

CCAAGTTATT TCTCATCTAC AATTTCGGTC GGAGGCATAG ATCGCTTAGG TAATTTATCA 3180

GATTTTAGCA ATAAAGGGGA TTCTGATGCA ATATATGCGC CTGCAGGCTC AACATTATCT 3240

CTTTCAGAAT TAGGACTTAA TAACTTTATT AATGCAGAAA AATATAAAGA AGATTGGATT 3300

TTTTCGGCAA CACTAGGAGG ATATACGTAT CTTTATGGAA ACTCATTTGC TGCTCCTAAA 3360

GTTTCTGGTG CGATTGCAAT GATTATTGAT AAATACAAAT TAAAAGATCA GCCCTATAAT 3420

TATATGTTTG TAAAAAAATT CTGGAAGAAA CATTACCAGT AAAAAATGGT ATAAAAGTGT 3480

TAAATATACC AAACGTATTG AGATATGATT TGAATATGTT ACAATTAGAA TATAAAAATG 3540

AACAAAGTTG GGATAGTTTC ATAGATAATG TTAATTTAAT TGAGTTGGAA GAGAGAATTC 3600

AAACTACTAT TGGAATTAAA CAAATAAACA CACACAATAT TATTACTATT GCCCGAGAAG 3660

GGTACTCTCA AAATTATTTA CCTAACACTT CAGAAAATAC ATATAATTCA TTACAAGTCA 3720

GTTTAGTTGG AGTATTACTA CTTTTTATAA GTATGGTAAA TATTTTATGG GCTAAAAAAA 3780

GTAAATGAAA ATAAAATTTG GAGCCCTCTG AAAAAGTAAG TCCTACAGTT CAACTAAAAT 3840

GAGTCAAAAG ATGAATCACC TTGATGTAGG GGAGTTTGTC TTATTGCTGC CTGAACACCT 3900

CCGTTCAGAG GAAGAACATT ATAAATCTGT TTTTGAAGAC GACTTAACCA GTCGCATATC 3960

TAGTCAAGAT GAACGACAGC AAATGACTGC TACGGTAGGT TATTTAGAAT CAGGTCAGGA 4020

TCGTTTTGTG TATAATACGA CCCCTATTTC TTACCAGCAG TTTTTGAAAG ATCCAATCAT 4080

CATTGTTATA ACACCCCAAT CAACTGGTCC ACAGTCCATT TTGTTTTGGA TAGACGCAGT 4140

ACAGAACTAC GTTCTCTTTA ATCAATTGTC TGATGCCCAG GAGCTTATCC AGAGACAAGG 4200

CATTGAAAAT TGGGTCTCAG AAATGCAAAC AGGTTACCAC AACTACATCA CATTATTGGA 4260

TAATATCCAG AGGGAACGTT GGGTAATGCT AGCAGGAGCT GTGCTTGGGA TTGCAACTTC 4320

AATCTTGTTG TTTAACACTA TGAATAGGCT CTACTTTGAA GAATTTAGAC GTGCCATTTT 4380

TATCAAACGC ATTGCAGGTC TCAGGTTCTT AGAAATCCAT CGCACTTATC TCTTTGCTCA 4440

ACTGGGTGTG TTTTTACTGG GATTTGTTGC GAGTGTATTT CTTCAGGTAG AGATAGGAGT 4500

TGCTTTCTTA GTCTTGTTAC TCTTTACTGG TCTATCTCTT TTACAGTTAC ATGTCCAAAT 4560

GCAGAAAGAA AACAAGATGT CCATGCTTGT TTTGAAGGGA GGTTAATATG ATTGAACTTA 4620

AACAGGTGAG TAAATCTTTT GGAGAACGAG AGTTATTTTC GAATCTTTCA ATGACATTTG 4680

AGGCTGGAAA AGTCTATGCC TTAATTGGTT CAAGTGGTAG CGGAAAAACA ACCTTGATGA 4740

ACATGATTGG GAAATTAGAA CCTTATGATG GGACGATTTT TTACCGAGGT AAAGACTTGG 4800

CCAATTATAA ATCAAGTGAT TTTTTCCGTC ACGAATTGGG CTACCTCTTC CAGAACTTTG 4860

GCTTAATTGA AAACCAAAGT ATTGAAGAAA ACCTTAAGCT AGGTCTCATT GGTCAAAAGT 4920

TGAGTCGGTC GGAACAGCGG TTGAGGCAGA AGCAGGCTTT AGAACAGGTC GGCCTGGTTT 4980

ATCTTGACCT AGATAAGCGC ATCTTTGAGT TATCGGGCGG AGAATCGCAA CGGGTTGCCT 5040

TGGCAAAAAT TATCTTAAAG AATCCACCCT TTATTCTGGC AGATGAGCCA ACAGCTTCAA 5100

TAGACCCAGC AACCTCTCAG TTGATTATGG AGATTTTGCT ATCTCTTCGA GATGATAATA 5160

GGCTAATCAT TATCGCAACA CATAATCCGG CAATTTGGGA GATGGCTGAT GAAGTGTTCA 5220

CGATGGATCA TCTGAAATAA AAATCCTTGT TTTTAATTGC ACGATGAGTT ACTGAAATAT 5280

TATCATGAAT CAAGAATTGG AGTTAATTTA GAATTGTACT TAATTTAGAA TTGTACTTTA 5340

TTAATATTGA GGTAACTTTT TCTTGATAAA GGAAGAAATA ATGGAGAGGA AGTTAGAATG 5400

AAAAAATTCG ACAATTATAT TATTGAGAAG CCTTGCGATT CTAATTCAGA TAAACTGCAA 5460

AAAATCTTAA TAATTGAAAG TTTGGTAGAT GATATTTTGC AATTTTCTCT CAGAATCAAT 5520

AATAGTGTAG GAGAGATTTT CCTCCTACAA CCGTTTTAAA AGAAAACTAT CTTTATTCCA 5580

TGTTATTTTG AGGAAGATAT TGTGAAAGTC AAAGATGATG ATAAAGTTGA GTGGAATTTG 5640

TTAGAATTTC AAAAATTTAG AGCATTTTTG GCTTAGTAAT CTGTGTTGAA GGCTCAAAAC 5700

CTATGGTAAA AAAGTAGCTT TGAAAACGTA TTGCCTCCAA AGATTTAGTT AAATAATGAT 5760

TTAACACAAA AAGAAATTAT TGAAGTTCTG GAAAGATGTT GTTTCAGTAT TGAGAAAAGG 5820

TGGGAAAAAC TTGCGATTTT CACAGAGAAA GGAAGAAAAA GTATAGAAAT ATAGTCAATT 5880

GAAACAAGAA CAGGATAAAA GAACCTTTTG TGCCATATTT TTCTCCTTTC GCTTTACAAT 5940

TGGATTGAAC ACCTTTATTG TATCGCGTTT GGAGTTTTTT TGGTATAACC TTCGACGCAC 6000

ACCCGCATAG CGGGTGTTTT TTTTGTCTCG CACCTAACGG AGCGAGACAA ACTAATAGTC 6060

ACTTAATCAA AAAACGCACC ATATCAAAAA CTAAAAAGTT TGATATCATG CGTCATGTCT 6120

TAAACTAATT GACTATACTT TCTATTCAAA TGAGCTTTTA ACCAATTGAT TGAGCCAATC 6180

CACTCTTAAA ACCAAAGAGC AATTTCTCGC TTAGCTGACT CTTCTGAATC TGAACCATGT 6240

ACAACATTTT GGATAATCTC ATTTTCTCCA GCAGCTTTTG CAAAATCACC TCGAATAGTG 6300

CCTGGTAAAG CTTCTTCTGG ACGAGTTGCA CCCATCATGG TCCGCCAAGT TTCGATTACT 6360

TTGGGACCAG AAATGACACC CACAAGAACT GGACCTGAAG TCATGAATTC ACGAATCGGT 6420

GGGTAAAAAC TCTGACCAAC CAAGTCCTGA TAGTGCTGGT CAATCAACTC TTCTGAAACC 6480

TGTGAACGAA ACTCCAATTT TTCGATTGTA AATCCACGTT GTTCGATGCG CTTTAACACT 6540

TCACCCACTA GCCCTCTTTT TACACCATCT GGTTTGATGA TAAAGAATGT TTGTTCCATA 6600

CCCGTCTCCT TTGTCAGCTT CTTTCTTTTA TTTTACCACA TTTCGTGGAA AAATGGAGAA 6660

AGTTTTCAGA AGAGAGAATG AGAGAACCCT CGGGTTCTCT CATTCTCTCT TATTCTACTG 6720

TTTCTTCCAC AGTTTCAACG GCAGTATCCA CAACTACTTC TGTTGTTTCT TCATTTCCTT 6780

CTTCCTCTAC TGGAGGATTA AGGTATTCTT CTTCGTTGAC AGCATGTGGT TCAAGGTTAC 6840

GGTAACGGGC CATACCAGTA CCAGCTGGGA TGATCTTACC GATGATAACA TTTTCTTTAA 6900

GTCCAAGGAG ATGGTCTTTC TTACCACGGA TAGCTGCGTC AGTAAGGACA CGAGTTGTTT 6960

CCTGGAAGGA AGCCGCTGAC AAGAAACTGT TTGTTTCAAG TGAGGCTTTG GTAATTCCCA 7020

TAAGGACTGG GCGACCTGTC GCTGGAACTC CACCTGCGAT AAGGACATCT TTGTTGGCAT 7080

CTGTAAAGTC ATTGATATCC ATGAGGGTAC CCATGAGAAG ATCTGTATCA CCTGGATCCA 7140

TGACACGGAC TTTACGGATC ATTTGACGAA CCATTACCTC GATGTGTTTG TCACCGATTT 7200

CTACCCCTTG GCTACGGTAA ACTTTTTGTA CTTCACCGAG AAGGTACGTT TCAACTGACA 7260

AGACATCACG AACTGCAAGG AGACGTTTTG GTTGGATAGA ACCTTCTGTC AGAGCAGCAC 7320

CACGCGCTAC TTGGCCCCCA ACTTCGACAC GCATACGAGC TGTAAATGGA ACGACATATT 7380

CACCTTCGCC AGTTTCACCC TTAACAAAGA CTTTCTTGGT ACGAGTTGAT GCATCTTCTT 7440

CGATAGCAGT AACTTGTCCT TTAACCTCTG TAATAACCGC TTCCCCTTTA GGATTGCGGG 7500

CTTCAAAGAT TTCTTGGACA CGAGGAAGAC CCTGAGTGAT ATCGGTATTT GAGGCAACCC 7560

CACCTGTGTG GAAGGTACGC ATTGTAAGCT GTGTACCAGG TTCCCCGATA GATTGGGCAG 7620

CGATTGTACC AACTGCTTCA CCAACTTCAA CCGCATCACC AGTCGCCAAG TTGATACCGT 7680

AACAGTGACG GCAGACACCG TGACGAGTGT TACATGTAAA TACAGAACGG ATAGTCACTT 7740

CTTCCACACC AGCATTGACA ATTTCACGCG CCTTGTCTTC TGTAATCAAT TCATTTGGAC 7800

CAATAATCAC TGCACCAGTT TCTGGATGTT TAACAGTTTT CTTAGTGTAA CGACCGTTGA 7860

GACGCTCTTC GAGAGACTCG ATCATCTCTT TTCCTTCTGC GATAGAACGG ATCAAGAGAC 7920

CACGGTCAGT TCCACAGTCG TCCTCACGGA TGATAACGTC TTGGGCAACG TCGACCAAAC 7980

GACGAGTCAA GTAACCTGAG TCGGCTGTCT TAAGGGCCGT ATCGGTCATA CCTTTACGAG 8040

CACCGTGAGT TGAGAAGAAC ATTTCCAATA CCGACAAACC TTCGCGGAAG TTTGAAAGGA 8100

TTGGCAATTC CATGATACGT CCATTCGGAG CAGCCATCAG ACCACGCATA CCGGCAAGCT 8160

GTGAGAAGTT TGAGATGTTA CCACGGGCTC CAGAGTCCAT CATCATAACG ATTGGGTTCT 8220

TAGGATCTTG GTTAGCAATC AAGCGTTTCT CAAGTTTTTC ACGGGCAGCA CGCCATTCAG 8280

CTGTAACAGC ATTGTAACGC TCGTCGTCTG TGATCATACC ACGACGGAAT TGTTTGGTGA 8340

TTTGTTCGAC ACGTTTGTGT GATTCTTCAA TGATTTCAGC CTTGTCATCA ACGACTGGGA 8400

TATCGGCAAT ACCCACTGTC AATCCTGCAA GAGTTGAGTG GTGGTAACCG AGGTTCTTCA 8460

TGCGGTCAAG TAGGGCAGAA GTTTCTGTCG TACGGAAACG TTTGAAGATT TCAGCGATGA 8520

TATTTCCAAG GTTTTTCTTC TTGAATGGAG GGTTGAGCTC AAGATTGCTG ATAGCTTCCT 8580

TGATATCTCC ACCAAGTGGC AAGAAGTATT TAGCTGGAAC ACCTTCTGTC AAGTTGGCAT 8640

TGTTTGGTTC TTGCAAGTAT GGTAGCCCCT CTGGCATGAT ATCGTTGAAG AGAATTTTAC 8700

CAACTGTTGT AAGCAAGACC TTATGTCTTT GCTCTTCTGT CCAAGGCTTG TTGAGGCTGT 8760

CTGTTGCGAT ACCAACACGT GAGTGGAGGT GAACATAACC ATTGCGGTAA GCCATAACCG 8820

CTTCGTCACG GTCTTTGAAG ACCATTCCTT CACCTTCGCG ACCAGCTTCT TCCATGGTCA 8880

AGTAGTAGTT ACCCAAAACC ATGTCCTGAG ATGGAGTAAC TACCGGTTTC CCATCTTTCG 8940

GGTTCAAGAT GTGCTCAGCA GCTAGCATGA GGATACGAGC TTCTGCTTGT GCTTCTTCTG 9000

AAAGTGGTAC GTGGATGGCC ATTTGGTCCC CGTCAAAGTC AGCATTGTAG GCTTCACAGA 9060

CAAGTGGGTG CAAGCGAAGA GCCTTACCAT CAATCAAGAC TGGCTCGAAG GCTTGGATAC 9120

CCAAACGGTG AAGGGTCGGT GCGCGGTTCA AAAGCACTGG GTGTTCTTTA ATCACTTCTT 9180

CAAGGATATC CCAGATACGC TCATCTCCGC GTTCCACCAA GCGTTTAGCT GCTTTGACGT 9240

TTTGCACGAT ATCACGGGCA ACGATTTCAC GCATGACAAA TGGTTTAAAG AGTTCAATCG 9300

CCATTTCACG CGGCACACCA CATTGGTACA TCTTAAGAGT TGGACCAACG GCGATAACTG 9360

AACGTCCTGA GAAGTCAACA CGTTTACCGA GCAAGTTTTG ACGGAAGCGT CCTTGTTTAC 9420

CTTTAAGCAT GTGGCTCAAT GATTTCAATG GACGGCTACC TGGTCCTGTG ATTGGACGAC 9480

CACGACGACC ATTGTCAATC AAAGCGTCAA CTGCTTCTTG AAGCATACGC TTCTCATTTT 9540

GAACGATGAT ACCTGGTGCA TTTAACTCAA GCAAACGAGC CAAACGGTTG TTACGGTTGA 9600

TAACACGGCG GTAAAGGTCA TTCAAGTCAG ATGAGGCAAA ACGGCCACCA TCCAACTGCA 9660

ACATTGGACG AAGATCTGGT GGGATAACCG GAAGGATGTT AAGAATCATC CATTCAGGTT 9720

TGTTTCCAGA CTTGTAAAAG GCATCCAAAA CATCCAAACG ACGGATGGCT TTGACACGCT 9780

TTTGTCCAGT AGCTGTTTTC AATTCTTCTT TGAGTTCAGC AATTTCTTTT TCAAGATCTA 9840

CTTGCTTCAA AAGGTCTTGG ATGGCTTCCG CACCCATCTT GGCAACAAAT GAACCATAAC 9900

CATATTCACG CAAGCGCTCT CGGTATTCGC GCTCTGTCAT GATAGACTTG TGCTCAAGTG 9960

GTGTATCCTT AGGATCAATC ACCACATAAG CCGCAAAGTA GATAACTTCC TCGAGGGCAC 10020

GAGGGCTCAT ATCAAGGGTC AAGCCCATAC GGCTTGGAAT CCCCTTGAAG TACCAGATGT 10080

GAGATACAGG AGCTTTCAAT TCGATATGTC CCATACGCTC ACGACGAACT TTCGTACGCG 10140

TTACTTCAAC CCCACAGCGG TCACAAACAA TTCCTCTGTA ACGAATGCGT TTGTACTTAC 10200

CACAAGCACA TTCCCAGTCT TTTGTAGGAC CAAAGATCAC TTCATCAAAG AGTCCTTCAC 10260

GTTCTGGTTT CAAGGTACGA TAATTGATTG TTTCAGGTTT TTTGACTTCT CCATAAGACC 10320

ATGAACGGAC TTTACTTGGA GAAGCTAGGG TGATTTGCAT ACTTTTAAAA CGATTTACAT 10380

CAACCACTAT TTCTTCCCTT TCTATTCTAA GTGAACTGCT TATTCTTGTT CAGCAGCTTC 10440

TTCTGTTGCT TCCGCTTTTG TTGCTTTCTC AGCTTCTTCA GCTTCAAAGG CTGCTTTAGC 10500

CTCTTGGGCT GCTTTTTCGC GGGCTTTTTC AAGGTCATCT ACGTGGATGA CATCTTCGTC 10560

CATTCCTTCA TCCAAGTCGC GAAGTTCCAC TTCTTGGTCA TCTTCGTCTA GGACACGCAT 10620

GTCAAGACCA AGAGATTGCA ATTCTTTGAC AAGAACTCGG AAGGATTCTG GAACACCTGG 10680

TTTTGGAATT GGTTTGCCTT TTGTAATAGC TTCATAGGCT TTCAAACGTC CGTTGATATC 10740

GTCCGACTTG TAAGTCAAGA TTTCTTGAAG GACATTTGAC GCACCGTAGG CTTCAAGAGC 10800

CCAAACCTCC ATCTCACCGA AACGTTGTCC ACCAAACTGA GCCTTACCTC CGAGTGGTTG 10860

TTGGGTAACA GTTGAGTATG GTCCGACTGA ACGCGCGTGC AATTTATCAT CAACCATGTG 10920

GTGGAGTTTG ATCATGTACA TGACTCCGAC AGAAACACGG TTATCAAACG GTTCACCAGT 10980

ACGTCCATCG TAAAGGATCG TTTTGGCATC GCTATCCATA CCTGCTTCTT TAACAGTTGA 11040

CCAAAGATCT TCAGAACTTG CTCCATCAAA GACTGGTGTA GCGATGTGAA TACCAAGAGT 11100

ACGAGCTGCC ATACCAAGGT GAAGCTCCAT AACCTGACCG ATATTCATAC GTGATGGTAC 11160

CCCAAGTGGG TTCAACATGA TGTCGACTGG AGTTCCGTCT GGAAGGTAAG GCATGTCTTC 11220

TACAGGAACG ATACGAGAGA CAACCCCTTT GTTTCCGTGA CGTCCGGCCA TTTTATCTCC 11280

GACCTTAATC TTACGTTTTT GAGCGATGTA AACACGAACC AACATGTTAA CACCTGATTG 11340

CAACTCATCT CCATTTACAC GTGTAAAGAT CTTAACATCA CGAACGACAC CATCGGCACC 11400

GTGTGGTACA CGAAGAGAAG TATCACGCAC TTCACGAGAC TTGTCTCCAA AGATAGCGTG 11460

CAAGAGACGT TCTTCAGCTG AAAGATCTTT CTCACCCTTA GGTGTTACTT TACCTACAAG 11520

AATATCACCT TCTTTAACCT CAGCACCAAT ACGGATAATC CCCATTTCGT CAAGGTCTTT 11580

GAGGGCATCT TCACCAACGT TTGGAATTTC GCGAGTGATT TCTTCAGGCC CAAGCTTTGT 11640

ATCGCGCGTT TCTGATTCGT ATTCTTCAAG GTGAACAGAT GTGTAGACAT CGTCCTTCAC 11700

CAAGCGTTCG CTCATGATAA CGGCATCCTC GAAGTTGTAA CCTTCCCAAG TCATGTAGGC 11760

AACGATTGGG TTTTGTCCAA GCGCCATTTC TCCATTTTCC ATAGAAGGTC CGTCAGCGAT 11820

GAAATCGCCT TTTTCAACGA CATCACCAAC TTTTACGAGA GTGCGTTGGT TGTAAGCAGT 11880

ACCTGAGTTT GAACGACGGA ATTTTTGGAT GTGGTAAACA TCCAATGAAC CATCTTCACG 11940

ACGAACTTCT ACCTTGTCAG CATCTGCGTA AGTAACTTTA CCATCATACT GAGCAATCAC 12000

AGCCGCACCA GAATCGTGGG CTGCTTGGTA TTCCATACCA GTACCAACGT AAGGTGCCTG 12060

AGGATTAATC AATGGCACAG CCTGACGTTG CATATTGGCT CCCATGAGGG CACGGTTGGA 12120

GTCATCGTTT TCCAAGAAAG GAATACATGC TGTCGCAACG GCAACTACCT GTTTTGGTGA 12180

AACGTCCATG TAGTCAACAA TATTAGCTGG ATACTCTTGG TTGACCCCTT GGTGACGTCC 12240

CATGACAATC TTCTCAGCAA AGGTTCCATC TTCATTCAGA CGAGAGTTAG CCTGAGCTAC 12300

AGTATATTCA TCTTCTTCAT CAGCTGTCAA CCAAACAATT TCGTTCGTGA CAACACCTGT 12360

TTCACGGTCA ACCTTACGGT ATGGTGTTTG AACAAAACCA TATTTGTTCA AGTGTCCATA 12420

AGATGACAAG TTATTGATCA AACCGATGTT AGGTCCTTCA GGTGTCTCGA TTGGACACAT 12480

ACGACCATAG TGAGTGTAGT GCACGTCACG TACTTCATAT CCAGCACGGT CACGAGTCAA 12540

ACCACCAGGT CCTAAGGCTG ACAAACGGCG TTTGTGAGAC AACTCAGAAA GCGGGTTGTG 12600

TTGGTCCATG AACTGTGACA ACTGTGATGA ACCAAAGAAT TCTTTAACTG CAGCTGTTAC 12660

AGGACGGATA TTGATAATTT GTTGTGGTGT CAAGACTTCA TTGTCCTGAA CAGACATACG 12720

TTCACGGACA TTACGTTCCA TACGAGAAAG TCCCAAACGT ACTTGGTTGG CAAGCAATTC 12780

ACCAACCGCA CGGATACGAC GATTTCCAAG GTGGTCGATA TCATCTACAC GGCCAAGTCC 12840

TTCAGCCAAG TTGAGGAAGT AGCTCATCTC AGCAAGGATA TCTGCAGGAG TCACCGTACG 12900

AACCTTGTCA TCTGGGTTAG CATTACCAAT GATCGTTACG ACGCGATCTG GATCAGTTGG 12960

AGCAATAACC TTGAATTTTT GAAGAACAAC AGGCTCAGTC ACAACGGCTG CATCGTTTGG 13020

GATGTAGACA ATCTTGTTCA AGTCGCCATC CAAATGGCTT TCAATGCTTT CAATCACGCT 13080

ACGAGTCATA ATCGTACCAG CTTCTACCAA GATTTCTCCA GTTTCAGGGT CTACCAATGG 13140

CTCTGCAATG GTTTGGTTGA GCAAACGTGT TTTAACATTG AGTTTTTTAT TGATTTTGTA 13200

ACGACCAACT GCTGCCAAGT CATAACGACG TGGGTCAAAG AAGCGAGCTA CAAGCAAGCT 13260

ACGTGAGCTT TCAGCCGTCT TAGGCTCACC TGGACGAAGG CGTTCGTAAA TTTCTTTCAA 13320

GGCTTCGTCT GTACGAGAGT CCATTGGATT CTTGTGGATA TCTTTTTCAA CAGTGTTGCG 13380

AACCAATTCG CTGTCACCAA AGATATCAAA GATTTCATCA TCACCTGAGA AACCAAGAGC 13440

ACGAACCAAG GTTGTAAATG GAATCTTACG AGTACGGTCG ATACGAGTGT AGGTGATATC 13500

TTTTGAGTCG CTTTCAAGTT CCAACCAAGC TCCACGGTTA GGGATAACAG TTGAACCATA 13560

GCCCACCTTA CCATTTTTGT CTACTTTGTC GTTAAAGTAA ACACCTGGTG AGCGGACCAA 13620

CTGAGAAACG ATAATACGTT CACCACCATT GATGATGAAA GTACCCATTT CTGTCATGAT 13680

TGGGAAATCA CCAAAGAAAA CTTCTTGGGT CTTGATTTCG CTTGTTTCTT TATTGATCAA 13740

ACGGAAGGTT ACAAAAATTG GTGCTGAGTA GCTAGCATCG TGGATACGAG CTTCTTCTAG 13800

CGTATATTTT GGTTCCTTGA TTTCATATCC AACAAATTCC AACTCCATTG TGTCTGTGAA 13860

GTTTGAAATT GGCAATACAT CTTCAAACAC TTCCTTAAGA CCGTGGTCTA GGAAAGCTTT 13920

GAATGAGTCA GTTTGAATTT CAATCAAATT TGGTAAGTCA AGAACTTCTT TGATTCTTGA 13980

AAAACTACGA CGGGTACGAT GTTTCCCGTA TTGAACGTCA TGTCCTGCCA AGATGATTCT 14040

CCTTTGTAAA TAAGTTCCAA GCCTTGTCAA TCAGGCTTTT CTAATCGTCA TATGGTTGTA 14100

AACCCCTTAT CACCGTGTCC TCTTGACGAA TTTTCAGAAT CTTTAAGCCT CTGTTACAAA 14160

TGCTCAAAAT CTTGAAAAAA AGCACAAAAA GAGCAGCTAA ATCTGACTTT TTCAGAAGAT 14220

TTAACTGCTG TGAGCCTTGT CTGGACAATA TTTCAGACAA AACCTACGAC AAATGATTAC 14280

CCATATTATA CCCTATTTAG CTAGATTTTT CAAGGGGTTT CAGTAGGTTT TTGGTAAATT 14340

TTTTCCCATA GAAAACTTGG CATCACATTC GAATCACGCT ATGGTACAAA AAACTGAAAA 14400

AACTATTGAC TGAAAATCAT TTTCAAGGTA TAATAATAAA CGTTAAGGCG GTATAGCCAA 14460

GTGGTAAGGC ACGGCTCTGC AAAAGCTTGA TCGTCGGTTC AAATCCGTCT ACCGCCTTCT 14520

ATAACTTGAT TTATCAGGTT TCAAATGAAC AGAAAGCCCA ATTTGAAGGG CTTTTTTTAT 14580

TTTCCCTCGA ATAAATACGT ATAACTTTAA AAACTTTTGG AGCGAGTTTG TGGCAGAGTT 14640

CTTTCCATGG CATAATTCCC TTTTGAAATC AG 14672

(2) INFORMATION FOR SEQ ID NO: 112:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 7902 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 112:

AGGAGACTAT TCAAGCCCAA ATTgAGTAGC CCAGCAAAGA CTGTATAGAC TGTGATACGT 60

TTTTCATAGC CATTGGTAAA GAGAATTTGG GAACCAAGAA TGGTATCTAA GGCCAGGATA 120

ATCGTACGAA AAGCGAAGAG AGAGGTCAAG ATGCCGCCTC CGATATATTT TTCACTACCG 180

TAAAGTAGGA TGGCATTTGG TCCTAAAACC ATGAGTCCAA AACTCAGTGG AATGATAAAG 240

AAGTTAAAGA TTCGACTACC TCTATTAACC AGAGAAACAT AGGCTTCTTT GTCTCCTTTC 300

CCCAGATAGT AACTGAGACG AGGCACACTC ACTCCAATTG CACCTGTTAC AACCCCAGCT 360

ATAACGGTCA CAATTCGCTG AGCTATGGTA TAGTAACTAA CGTTGACATC AATCCCTGTT 420

TTAACGAGGA AGAGGCGATC TAAAAAAGTG AAGAGCATAT TGGCATTGGC AAAGACTAAC 480

ATGGCTGTCA GAGGGAGAAA GAGTGGTTTA AAATCACTTA GGTGAATTTT AACAAGTTTG 540

ATGTCTCTTT TAATCCAAAA ATAACTAATC AGGTAGTTAA TCAGCGTCGA TAAACTCATC 600

ACAAGTGTAT AGACAACAAT ATCGTGTTCA TTTTTAACAA ATAAGAAAAT AGAGACCAGC 660

ATCAGGATAC GGATGAAGGC AGTTTTGTAA AAGAGAAAAC TGTAATTTTC CAGAGCTTCA 720

TTGACCCATT CGATTGAAAA AATCTGGGCA ATGAGTTGAA TCCCCATAAC AAGGTAGACC 780

TTTTTGACGA TTGGATTATC AGTAAAGAAG AGAGGATAGG CTAGGATATA GACAGCAGTG 840

GTCAAAATCG TACAAGCGAT GCACAAATAA AAAAGACTAG AAAAGGTTCT GTTAAGATCT 900

TTTTTGTTAT CCTTGACATT ACTGATAGCC CTTAAACCGT AGTTATAGAC ACCATAAGTT 960

GCAAAGGGCA AGAAAAATGA CAAAATAGTG TCGACTGAGT TGAAGTAACC ATAGTCAGTT 1020

CGGTCCAAGA CACGCGCGAC ATAGGTTCCA GTTAGGATGG GAAAAATAAT ATTCAAGACA 1080

CGAATTCCCA TGTAAGATAG AGCATTTAAT TTTATACTTT TCATTCAATT TACCTCGTTT 1140

TTCATTATAT CATAAAGTTA GCTAATAAGA AATGAAGGGC AGTAAGTCAA GTAATCACTT 1200

TGAAGTTTCA AATCTTAAGT TTTAAGTTTT CTTTAAGGAA AGTATATTAT TCTGAAGGAC 1260

TCTAAAATTT CGCAGCCATT TATTAGTAAT TGCTACAGAA TTCCTAGTCA TTACTAGAAA 1320

TGGACTAGTT TCTTTGAATA ATAGAACTGC ATAATTCTCC TATTCTAGAA GGGGAGGACC 1380

AGTATTTCTT TTATGATAGG ACTAGATTGT GGTATAATAG AGAGAATAAG TTTTTTTAGT 1440

AAGACAAAGG AGAAAATAGA TGATTTATGC AGGAATTCTT GCCGGTGGAA CTGGCACACG 1500

CATGGGGATC AGTAACTTGC CAAAACAATT TTTAGAGCTA GGTGATCGAC CTATTTTGAT 1560

TCATACAATT GAAAAATTTG TCTTGGAGCC AAGTATTGAA AAAATTGTAG TTGGTGTTCA 1620

TGGAGACTGG GTTTCTCATG CAGAAGATCT TGTAGATAAA TATCTTCCTC TTTATAAGGA 1680

ACGTATCATC ATTACAAAGG GTGGTGCTGA CCGCAATACA AGTATTAAGA ACATCATTGA 1740

AGCCATTGAT GCTTATCGTC CGCTTACTCC AGAGGATATC GTTGTTACCC ACGATTCTGT 1800

TCGTCCATTT ATTACACTTC GCATGATTCA GGACAATATC CAACTTGCCC AAAATCATGA 1860

CGCAGTGGAC ACAGTGGTAG AAGCGGTTGA TACTATCGTT GAAAGTACCA ATGGTCAATT 1920

TATTACAGAT ATTCCAAATC GTGCTCACCT TTATCAAGGA CAAACACCTC AAACATTCCG 1980

TTGCAAGGAC TTCATGGACC TTTATGGATC TCTTTCTGAT GAAGAGAAGG AAATCTTGAC 2040

AGATGCATGT AAAATCTTTG TGATCAAAGG AAAAGATGTG GCTTTGGCCA AAGGTGAATA 2100

CTCAAATCTG AAGATTACAA CCGTAACAGA TTTGAAGATT GCAAAAAGTA TGATTGAGAA 2160

AGACTAGTAA AATGATTAAT CAAATTTATC AACTAACTAA GCCTAAGTTT ATCAATGTCA 2220

AATATCAGGA AGAGGCTATT GACCAAGAGA ATCATATCCT TATCCGTCCC AACTACATGG 2280

CTGTCTGTCA TGCGGATCAG CGTTACTATC AGGGAAAACG TGATCCCAAG ATTTTGAATA 2340

AAAAGCTTCC AATGGCAATG ATTCACGAGT CATGTGGAAC CGTCATTTCT GACCCGACCG 2400

GAACCTACGA GGTTGGTCAA AAAGTTGTCA TGATTCCCAA TCAGTCTCCT ATGCAGAGTG 2460

ATGAAGAATT CTATGAAAAC TACATGACAG GGACCCATTT CTTGTCTAGT GGATTTGATG 2520

GCTTTATGAG AGAGTTTGTT TCTCTCCCTA AAGATCGTGT GGTGGCTTAT GATGCTATTG 2580

AAGATACGGT TGCAGCCATT ACAGAGTTTG TCAGTGTGGG CATGCACGCT ATGAATCGTC 2640

TATTGACTCT TGCTCATAGC AAGCGGGAGC GGATCGCCGT TATTGGAGAT GGAAGTTTAG 2700

CTTTTGTGGT TGCCAATATT ATCAACTATA CTTTGCCAGA AGCAGAGATT GTGGTTATTG 2760

GTCGTCATTG GGAAAAGTTG GAACTCTTCT CATTTGCCAA AGAATGCTAT ATTACGGATA 2820

ATATTCCTGA AGATTTGGCC TTTGACCATG CTTTTGAATG TTGTGGTGGT GATGGTACTG 2880

GACCAGCTAT TAATGACTTG ATTCGCTACA TTCGTCCTCA GGGAACGATT CTCATGATGG 2940

GAGTTAGCGA ATATAAAGTC AATCTCAATA CTCGCGATGC CTTAGAAAAG GGCTTGATTT 3000

TGGTTGGGTC ATCTCGTTCT GGTCGCATTG ATTTTGAAAA TGCTATCCAA ATGATGGAAG 3060

TCAAGAAATT TGCCAATCGT CTTAAAAATA TCCTTTATCT AGAAGAACCT GTAAGAGAAA 3120

TTAAAGATAT TCATCGTGTC TTTGCAACCG ATTTAAACAC AGCCTTTAAA ACAGTGTTTA 3180

AGTGGGAAGT ATAAGTACTG GAGGTTAATT GTGGAGAAAA TCATTAAAGA AAAAATTTCT 3240

TCCTTACTTA GTCAAGAAGA GGAAGTCCTC AGTGTTGAAC AACTGGGTGG AATGACCAAT 3300

CAAAACTATT TGGCCAAAAC AACAAATAAG CAATACATTG TTAAATTCTT TGGTAAAGGG 3360

ACAGAAAAGC TTATCAATCG ACAAGATGAA AAGTACAATC TTGAACTACT AAAGGATTTA 3420

GGCTTAGATG TAAAAAATTA TCTTTTTGAT ATTGAAGCTG GTATCAAAGT AAATGAGTAT 3480

ATCGAATCTG CGATTACGCT TGATTCAACG TCAATCAAGA CCAAGTTCGA CAAAATTACT 3540

CCAATATTAC AAACTATTCA TACGTCTGCT AAGGAATTAA GAGGAGAATT TGCTCCTTTT 3600

GAAGAAATCA AAAAATACGA ATCCTTGATT GAAGAACAAA TTCCTTATGC CAACTATGAA 3660

TCTGTTAGAA ATGCAGTCTT CTCCTTAGAG AAAAGACTGG CTGACTTAGG TGTTGACAGA 3720

AAATCTTGTC ATATCGATTT GGTGCCTGAA AACTTTATCG AATCACCTCA AGGACGACTT 3780

TATTTGATTG ACTGGGAATA TTCATCAATG AATGATCCAA TGTGGGATTT GGCTGCCCTC 3840

TTTTTAGAGT CTGAATTCAC TTCCCAAGAG GAAGAAACTT TCTTATCTCA CTATGAGAGT 3900

GACCAAACAC CGGTTTCTCA TGAAAAGATT GCTATTTATA AAATTTTACA AGATACTATT 3960

TGGAGTCTAT GGACTGTCTA TAAGGAAGAG CAAGGTGAAG ATTTTGGTGA CTATGGTGTG 4020

AATCGTTACC AAAGAGCTAT TAAAGGTTTG GCTTCTTATG GAGGTTCAGA TGAAAAGTAA 4080

AAACGGAGTT CCTTTTGGCC TTCTCTCAGG TATTTTCTGG GGCTTGGGTC TAACGGTTAG 4140

TGCTTATATC TTTTCGATTT TTACAGATTT GTCACCCTTT GTGGTGGCTG CAACTCATGA 4200

TTTTTTGAGC ATCTTTATCT TACTAGCTTT TCTCTTGGTA AAAGAAGGGA AAGTTCGCCT 4260

CTCAATTTTC TTAAATATTC GCAATGTCAG TGTTATCATC GGAGCCTTGC TAGCAGGCCC 4320

TATCGGTATG CAGGCCAATC TTTATGCAGT TAAGTATATC GGAAGTTCTT TAGCTTCATC 4380

TGTATCGGCT ATTTACCCTG CGATTTCAGT TCTATTGGCT TTCTTCTTTT TGAAGCACAA 4440

GATTTCGAAA AATACTGTAT TTGGGATTGT CTTGATTATT GGAGGGATTA TTGCTCAGAC 4500

CTATAAGGTT GAACAGGTTA ATTCTTTCTA CATTGGGATT CTTTGTGCTT TGGTTTGTGC 4560

TATTGCATGG GGAAGTGAGA GTGTTCTTAG CTCTTTTGCC ATGGAAAGTG AATTGAGTGA 4620

AATCGAAGCC CTCTTAATCC GTCAAGTAAC TTCGTTCTTG TCCTATCTTG TGATTGTGCT 4680

CTTCTCTCAT CAGTCATTTA CTGCAGTAGC CAATGGACAA TTGCTAGGTC TCATGATTGT 4740

TTTTGCAGCC TTTGATATGA TTTCCTACTT GGCTTATTAT ATCGCTATCA ATCGCTTGCA 4800

ACCAGCCAAG GCTACAGGCT TGAACGTGAG CTATGTAGTA TGGACGGTCT TGTTTGCAGT 4860

TGTTTTCTTG GGTGCACCGC TAGATATGCT GACCATTATG ACGTCACTTG TCGTCATTGC 4920

TGGAGTTTAT ATTATTATTA AAGAATAAAG GAGATTCGTG TGAAAGCCAT TATCTTAGCA 4980

GCGGGATTGG GAACTCGCTT GCGTCCTATG ACTGAAAATA CCCCTAAAGC CTTGGTTCAG 5040

GTTAATCAAA AACCTTTGAT TGAGTACCAA ATTGAGTTTC TCAAAGAAAA AGGAATCAAT 5100

GACATCATCA TCATTGTTGG TTATCTTAAA GAACAATTCG ATTACTTGAA AGAGAAATAC 5160

GGTGTTCGTC TCGTTTTCAA TGATAAATAC GCTGACTACA ATAACTTTTA CTCTCTCTAT 5220

CTTGTAAAAG AAGAATTGGC CAACAGCTAT GTTATTGATG CTGACAATTA TCTCTTTAAA 5280

AATATGTTCC GCAATGATTT GACACGTTCG ACTTATTTTA GTGTTTATCG TGAAGATTGT 5340

ACCAACGAAT GGTTCTTGGT TTATGGAGAT GACTACAAGG TTCAAGACAT TATTGTTGAT 5400

AGCAAGGCAG GTCGCATCCT TAGTGGTGTA TCCTTCTGGG ATGCTCCAAC TGCAGAAAAG 5460

ATTGTCAGCT TTATCGACAA GGCTTATGTA AGTGGTGAAT TTGTTGATCT CTATTGGGAC 5520

AATATGGTTA AGGATAATAT CAAAGAGCTA GATGTCTATG TTGAAGAATT AGAAGGCAAT 5580

AGCATTTATG AGATCGATAG TGTCCAAGAC TATCGTAAAT TAGAAGAAAT TCTTAAAAAC 5640

GAAAATTAAA GATTCCAACA TCTGACAAAA TAGTCGGATG TTTTTTGATT TTTTACGAAC 5700

TTTTACGAAT AGATAGATGA GTAGAAAAAG AAATGGAGTT ATTTATGAAA ATCACAAACT 5760

ATGAAATCTA TAAGTTAAAA AAATCAGGTT TGACCAATCA ACAGATTTTG AAAGTGCTAG 5820

AATACGGTGA AAATGTTGAT CAGGAGCTTT TGTTGGGTGA TATTGCAGAT ATCTCAGGTT 5880

GCCGTAATCC AGCCGTTTTT ATGGAACGTT ATTTTCAGAT AGACGATGCG CATTTGTCGA 5940

AAGAGTTTCA AAAATTTCCA TCTTTCTCTA TTTTAGATGA CTGTTATCCT TGGGATTTGA 6000

GTGAAATATA TGATGCGCCT GTACTTTTAT TTTACAAGGG AAATCTTGAC CTCCTGAAAT 6060

TCCCGAAGGT AGCGGTCGTG GGCAGTCGTG CTTGTAGCAA ACAGGGAGCT AAGTCAGTTG 6120

AAAAAGTCAT TCAAGGCTTG GAAAATGAAC TGGTTATTGT CAGTGGTCTG GCCAAGGGCA 6180

TTGACACAGC AGCTCATATG GCAGCTCTTC AGAATGGCGG AAAAACCATT GCAGTGATTG 6240

GAACAGGACT GGATGTGTTT TATCCTAAAG CCAATAAACG CTTGCAAGAC TACATCGGCA 6300

ATGACCATCT GGTTCTAAGT GAATATGGAC CTGGTGAACA ACCTCTGAAA TTTCATTTTC 6360

CTGCCCGTAA TCGCATCATT GCTGGACTTT GTCGTGGTGT GATTGTAGCA GAGGCTAAGA 6420

TGCGTTCAGG TAGTCTCATT ACGTGTGAGC GAGCAATGGA AGAAGGACGC GATGTCTTTG 6480

CTATTCCTGG TAGCATTTTA GATGGACTAT CAGACGGTTG CCATCATTTG ATTCAAGAAG 6540

GAGCAAAATT GGTCACCAGT GGGCAAGATG TTCTTGCGGA ATTTGAATTT TAAAAATGAC 6600

CTAAGCTAGA ATTCTAAGAA AAAATCAATT TTAAGAGAAA ATGAACCCAA CATTTCCATA 6660

ATAAAACGCA TATTAGCAAG TTTTTAACAC TTGATAATAT GCGTTTTTTC TAAGTGGATT 6720

AGTAGAGTAG AGGATTTTTC TCATATAATA CTCTTCGAAA ATCTCTTCAA ACTACGTCAG 6780

CTTCCATCTG CAACCTCAAA ACAGTATTTT GAGCgaCTtC GTCAGTCTTA TCTACAACCT 6840

CAAAGCAGTG CTTTGAGCAA CCTGTGGCTA GCTTCCTAGT TTGCGCTTTG ATTTTCATTG 6900

AGTATAAGGG AAAGTATAGT GAATTGAAAT AAGATGTGAA CAACTCTATC AGGAAAGTCA 6960

AATTAATTTA TAGAAATATT TTAGCAGCCA AGGTGTACTG TTATAGATTC AATTACACTA 7020

TAATTTAGTG TAATTGAGAA AGGAGAAATG ATTGTGATTG ATGTTGGCTA GGTTATGTTC 7080

AATGATTCCT ACCGTCTCAA ATCTTGTCAG TAAGGAAAAA TAAATTCTTC AAAAGTAGAG 7140

ATTACAAGGC TTGTTTAAGA AAGAATTCAA AGACCTTGAC AAATAAAAAT AAAATGGTTA 7200

TTATAAAAAA TGGTCTGAAA TAGATGATGA TACTTTTCGA AAATCTCTTC AAATACGTCA 7260

GCTCAGCTTT GCCTTGCTGT GTTTTGAGCA AGCTACGGTT AGCTTCCGAG TTTGATTTTC 7320

ATTTACTAGA AATGAAACTG ATGAGAGATA TCAGTAGACA TTTGAGTCAG GATATTATGG 7380

AAAATGATAA AAAGAGCTCG TGAGATTGGC ATATCAGACT ACTAAAGTAT TGAGTTTGTT 7440

AGGATTTTAG CGACTAGTTA GCTGGGAAAG GAAGATATTT GTGACAAATA ATAAACTGTA 7500

TTCGTTGATA GAATTTAGAA ATAAAATATA TGAAGAATTA GAACTTTCCA GAAGTGATTT 7560

AGCGATTTTA CTATGTGCCA TGCTTATCGC CTCTATCGGA TTAAATATGG ATTCGACTCC 7620

CGTGATTATT GGAGCCATGT TAATCTCTCC TTTGATGACA CCTATTCTGG GAGTGGGGCT 7680

CTCTCTAGCT ATATTTGATT TTAAATTGTT AAGAAAATCT TTTAAAATAT TAGCTATTCA 7740

AATTCTTGCC AGTCTAATAG CTTCAACACT TTATTTTTAT CTTTCTCCCA TTTCGTATGC 7800

TAGTTCGGAG ATTGTTGCTA GAACCTCTCC GACTATTTGG GATGTTCTCA TTGCTTTTGT 7860

AGGAGGGATA GCAGGTATCA TTGGTGCTAG GAAAAAAGAG AC 7902

(2) INFORMATION FOR SEQ ID NO: 113:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 18627 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 113:

GAAGTTGAAA TGGCCAGCTG ATGAGCAATA TCGGTCATAG AAATCTTCTC AATCAACTTT 60

TGCGCAATTT TTTGGTTGAT AATACGAGGA ATTTGGTGAT TTTTCTTGAC GATAGAAGTT 120

TCAGCGACCA TCATTTTTGA ACAGTGATAG CACTTGAAAC GACGCTTTCT AAGTAGAATT 180

CTAGTAGGCA TACCAGTTGT CTCAAGGTAA GGAATCTTAG ACGGTTTTTG AAAGTCATAT 240

TTCTTCAATT GGTTTCCGCA CTCAGGGCAA GATGGGGCGT CGTAGTCCAG TTTGGCGATG 300

ATTTCCTTGT GTGTATCTTT ATTGATGATG TCTAAAATCT GGATATTAGG GTCTTTAATG 360

TCTAGTAATT TTGTGATAAA ATGTAATTGT TCCATATGAA TCTTTCTAAT GAGTTGTTTG 420

GTCGCTTTTC ATTATAGGTC ATATGGGACT TTTTTTCTAC AATAAAATAG GCTCCATAAT 480

ATCTATAAGG GATTTACCCA CTACAAATAT TATAGAGCCA AAAATCCTTT GTTTACTAAA 540

CAAGGGATTT TTCTTTTGTC TCTGCTCCTT TTTTGATATA ATAGTTCTAT GTTAAAATCA 600

GAAAAACAAT CACGTTATCA AATGTTAAAT GAAGAATTGT CCTTCCTATT GGAAGGCGAA 660

ACCAATGTTT TGGCTAATCT TTCCAACGCC AGTGCTCTCA TAAAATCACG TTTTCCTAAT 720

ACCGTATTTG CAGGCTTTTA TTTGTTCGAT GGAAAGGAAT TGGTTTTAGG CCCCTTCCAA 780

GGAGGTGTTT CCTGCATCCG TATTGCACTA GGCAAGGGTG TTTGTGGTGA GGCAGCTCAC 840

TTTCAGGAAA CTGTTATTGT TGGAGATGTG ACGACCTATC TCAACTATAT TTCTTGTGAT 900

AGTCTAGCTA AAAGTGAAAT TGTGGTGCCG ATGATGAAGA ATGGTCAGTT ACTTGGAGTT 960

CTGGATCTGG ATTCTTCAGA GATTGAGGAT TACGATGCTA TGGATCGAGA TTATTTGGAA 1020

CAATTTGTCG CTATTTTGCT TGAAAAGACA GCATGGGACT TTACGATGTT TGAGGAAAAA 1080

TCTTAATGTA TCAAGCACTT TATCGAAAAT ATAGAAGTCA AAACTTCTCC CAGTTAGTTG 1140

GTCAAGAAGT TGTGGCTAAG ACTCTTAAAC AAGCGGTGGA GCAAGAGAAA ATAAGTCACG 1200

820

CTTATCTTTT TTCTGGTCCT CGTGGAACGG GAAAAACCAG TGTTGCTAAA ATCTTTGCCA 1260

AGGCTATGAA CTGTCCCAAT CAAGTGGGTG GCGAACCTTG CAATAACTGC TATATTTGTC 1320

AAGCAGTGAC GGACGGTAGT TTAGAAGATG TCATTGAAAT GGATGCAGCT TCTAATAATG 1380

GGGTAGATGA AATTCGCGAA ATTCGTGATA AATCTACCTA TGCGCCTAGC CTTGCTCGTT 1440

ATAAGGTTTA TATCATAGAT GAGGTTCACA TGCTGTCTAC AGGGGCTTTT AATGCCCTCC 1500

TAAAGACGCT GGAAGAACCA ACACAGAATG TAGTCTTTAT TTTGGCCACT ACTGAATTGC 1560

ACAAGATTCC TGCTACTATT CTATCCCGTG TGCAACGTTT TGAGTTTAAA TCAATTAAGA 1620

CACAGGATAT TAAGGAACAT ATTCACTATA TCTTAGAAAA AGAAAATATC AGTTCTGAAC 1680

CAGAGGCTGT GGAAATCATT GCCAGACGGG CGGAAGGTGG AATGCGGGAC GCCTTGTCTA 1740

TTTTGGATCA AGCCCTGAGT TTGACACAGG GAAATGAGCT GACGACTGCT ATCTCTGAAG 1800

AAATTACTGG CACCATTAGC CTATCAGCCT TGGATGATTA TGTGGCGGCC TTGTCTCAAC 1860

AGGATGTTCC CAAAGCTTTG TCTTGCTTGA ATCTTCTTTT TGACAATGGT AAGAGCATGA 1920

CTCGTTTTGT GACCGATCTT TTGCACTATT TAAGAGACTT GTTAATTGTT CAAACAGGGG 1980

GAGCAAATAC TCATCATAGT TCAGTCTTTG TAGAAAATTT GGCACTTCCT CAAAAAAATC 2040

TGTTTGAAAT GATTCGCTTA GCAACAGTGA GTTTAGCAGA TATTAAGTCT AGTTTGCAAC 2100

CCAAGATTTA TGCTGAAATG ATGACCGTCC GTTTGGCGGA AATCAAGTCC GAACCAGCTC 2160

TATCAGGAGC GGTTGAAAAT GAAATTGCTA CGCTGAGACA GGAAGTTGCC CGTCTCAAAC 2220

AAGAGCTTTC TAATGTAGGT GCGGTTCCTA AACAAGTTGC ACCAGCTCCT AGTCGACCAG 2280

CTACGGGCAA AACAGTCTAT CGTGTCGATC GCAATAAAGT GCAATCTATC TTACAAGAGG 2340

CCGTCGAAAA TCCTGATTTA GCACGTCAAA ATTTAATTCG TTTGCAGAAT GCCTGGGGAG 2400

AGGTAATTGA AAGTCTAGGT GGGCCGGACA AGGCTCTGCT AGTTGGTTCT CAACCGGTTG 2460

CTGCCAATGA ACACCATGCT ATTCTTGCTT TTGAGTCTAA CTTCAATGCT GGTCAAACTA 2520

TGAAACGAGA CAATCTCAAT ACCATGTTTG GTAATATCCT CAGTCAGGCG GCAGGTTTTT 2580

CACCTGAGAT TTTAGCTATT TCCATGGAGG AATGGAAAGA AGTTCGCGCA GCCTTTTCAG 2640

CCAAAGCCAA ATCTTCTCAA ACTGAAAAAG AAGTAGAAGA AAGCCTGATT CCAGAAGGAT 2700

TTGAATTTTT GGCTGATAAA GTGAAGGTAG AGGAAGACTA AAGAAAGATT TCATGATACA 2760

ATAAGTTTAT GAATAAACAA CAATTTATTA TTATGGCGCT GTTTACAGCT GCTGAGACCT 2820

ATTTTTTCAA TGAAGCCTGG ATGACTGGCC GCTATATTAT GGCAGCCTTT TGGGCAATTT 2880

TACTCTTTAG AAATTTCCGA GTCAGTTATG TGATGGGCAA AATCGTTGAT GTCATCGATC 2940

AGCATTTTAA TAGGAAAGAC TAGCCCTCAG CTTCCAGACA AAATCAAAGC CTTTTAGGCT 3000

TTTTTTTGTT ATACTAGAAA AGTATATTTA TAGAATTTTT GCTCTATTTC TGGGGAAATC 3060

AGACGTTTTT CTAGTAAGTA CTGTAAAAGT TTTGAAAAAG AAAGGAACTA TCATGTCAGT 3120

ATTAGAGATC AAAGATCTTC ACGTTGAGAT TGAAGGAAAA GAAATTTTAA AAGGGGTTAA 3180

CCTGACCCTG AAAACAGGAG AAATTGCCGC TATCATGGGA CCAAATGGTA CAGGTAAATC 3240

GACTCTTTCT GCCGCTATCA TGGGAAATCC AAACTATGAA GTAACTAAAG GTGAAGTTTT 3300

GTTTGATGGC GTAAACATCC TTGAGTTGGA AGTGGATGAG CGTGCGCGTA TGGGACTTTT 3360

CCTTGCTATG CAATACCCAT CAGAAATCCC TGGAATTACC AATGCTGAGT TTCTTCGTGC 3420

CGCTATGAAT GCGGGTAAAG AAGATGATGA GAAGATTTCA GTTCGTGAGT TTATTACTAA 3480

GCTAGATGAA AAAATGGAAT TGCTCAACAT GAAAGAAGAA ATGGCAGAGC GTTACCTCAA 3540

CGAAGGCTTC TCTGGTGGTG AGAAAAAACG CAATGAAATT CTTCAACTTT TGATGTTGGA 3600

GCCAACATTT GCTCTTTTGG ACGAGATTGA CTCAGGTCTT GATATTGACG CTCTTAAAGT 3660

TGTGTCTAAA GGTGTCAATG CCATGCGTGG TGAAGGTTTT GGTGCTATGA TCATCACTCA 3720

CTACCAACGT CTTTTGAACT ATATCACACC TGATGTGGTA CACGTGATGA TGGAAGGTCG 3780

TGTTGTCCTT TCTGGTGGTC CAGAATTGGC TGCGCGTTTG GAACGTGAAG GATACGCAAA 3840

ATTAGCTGAA GAACTTGGCT ACGACTACAA GGAAGAATTG TAATTCCCTC GTATCTTTTA 3900

GGAGAAGTAA ATGACTAGAG AAAATATTAA ACTTTTTTCA GAAATGCACG CTGAACCAAG 3960

CTGGTTGGCT GATCTCCGTC AAAAAGCTTT TGACAAGATT GAGACTTTGG AATTACCAGT 4020

TATTGAGTGT GTCAAATTCC ACCGTTGGAA TCTGGGTGAT GGAACGATTA CAGAAAATGA 4080

GCCATCAGCA AATGTTCCAG ATTTCACAGC TTTAGATCAT CACTTGAAGT TGGTGCAAGT 4140

AGGAACTCAA ACTGTTTTCG AACAAACTCC AGTTGAGTTA GCTGAACAGG GTGTTGTCTT 4200

CACAGACTTT CACTCAGCTT TAGAAGAAAT TCCAGAGCTG ATCGAAGAAT TCTTCATGTC 4260

ATCTGTTAAG TATGATGATG ACAAGTTGGC GGCTTACCAC ACAGCTTACT TTAACAGTGG 4320

TGCTGTACTC TATATTCCAG ATAACGTAGA AATCACAGAG CCAATTGAAG GAATTTTCTA 4380

CCAAGATAGC GATAGCAATG TGCCGTTTAA CAAGCATATT ATGATTATCG TTGGTAAAAA 4440

TTCTAAGATT AGTTATCTGG AGCGTTTAGA GTCACGCGGT GAAGGAAGTG ACAAAGCAAC 4500

TGCCAATATC ACAGTGGAAG TGATTGCACG TTCTGGTGCG CAAGTCAAGT TTGCTGCTAT 4560

CGACCGTCTA GGTGAAAACG TCACTGCCTA CATTAGCCGT CGTGGTAAAT TAGGCAACGA 4620

TGCAAGTATT GACTGGGCTA TCGGTGTCAT GAACGAAGGA AATGTCGTTG CTGATTTTGA 4680

TAGTGACTTG ATTGGTAATG GTAGCCATGC TGACCTCAAG GTTGTAGCTC TTTCAAGTGG 4740

TCGTCAGGTA CAAGGGATTG ATACTCGTGT AACTAACTAT GGCTGCAACT CAATCGGAAA 4800

CATTCTACAA CATGGGGTTA TCCTTGAAAA AGCAACTTTG ACTTTCAATG GTATCGGCCA 4860

CATCATCAAG GGTGCTAAGG GAGCAGATGC GCAACAAGAG AGCCGTGTTC TCATGCTTTC 4920

AGACCAAGCG CGTTCAGATG CTAACCCAAT TCTTTTGATT GATGAAAATG ACGTAACTGC 4980

AGGCCATGCA GCCTCTATTG GTCAGGTAGA TCCAGAAGAT ATGTACTACC TCATGAGTCG 5040

TGGCTTGGAT AAGGCAACTG CAGAGCGTTT GGTTGTTCGT GGTTTCCTTG GATCTGTTAT 5100

CGTGGAGATT CCAGTCAAGG AAGTTCGTGA TGAAATGATT GCAACTATCG AAGAGAAATT 5160

GTCAAAACGC TAAGGGGCAG CCTATGTTAG ATGTAGAAGC GATTCGCAAG GATTTTCCAA 5220

TTTTAGATCA GATTGTCAAT GATGAACCTC TGGTCTATCT GGACAATGCT GCGACGACAC 5280

AAAAACCACT AGTAGTTCTG AAAGCTATTA ACAGCTACTA TGAGCAGGAC AATGCCAATG 5340

TTCACCGTGG TGTCCATACC TTAGCGGAAC GAGCGACAGC TTCTTATGAA GCTGCTCGTG 5400

AAACCATTCG TAAGTTTATT AATGCAGGCT CTACAAAGGA AGTTCTCTTT ACCAGAGGAA 5460

CGACAACCAG CCTTAACTGG GTGGCACGCT TTGCTGAGGA AATTCTCACT GAGGGAGACC 5520

AGGTCTTGAT TTCAGTAATG GAACACCATT CTAATATCAT TCCATGGCAG GAAGCTTGTC 5580

GAAAGACTGG AGCAGAGCTT GTCTATGTCT ATCTTAAAGA CGGTGCCTTG GATATGGAGG 5640

ATTTGCGAGC TAAATTGACT GATAAGGTTA AATTTGTTTC CCTAGCTCAT GCCTCCAATG 5700

TTCTTGGTGT GGTCAATCCG ATCAAGGAAA TCACTCAATT AGCCCACCAA GTTGGGGCAA 5760

TTATGGTAGT GGATGGTGCT CAATCTACAC CTCATATGAA GATTGATGTC CAGGACTTGG 5820

ATCTGGACTT TTTCGCCTTT TCGGGTCACA AGATGGCTGG TCCGACTGGT ATCGGTGTCC 5880

TTTACGGCAA AGAAAAGTAT CTTGAGCAAA TGTCTCCAGT AGAATTTGGC GGCGAGATGA 5940

TTGATTTTGT CTACGAGCAA TTTGCTAGTT GGAAGGAATT GCCTTGGAAA TTTGAGGCTG 6000

GAACGCCAAA TATGGCAGGA GCTATTGGAC TTGCGACTGC AGTTGATTAT CTGGAAAAGA 6060

TTGGTATGGA TGCCGTTGAA GCTCATGAAC AGGAATTGAT TGCGTACGTC TATCCAAAAC 6120

TGCAGGCAAT TGAGGGATTG ACCATTTACG GTTCTCAGGA TTTGGCTCAA CGTTCGGGTG 6180

TTATTGCCTT TAACCTAGGT GATCTCCATC CTCACGATCT TGCGACGGCT CTGGATTATG 6240

AAGGAGTGGC TGTTCGTGCT GGTCACCATT GTGCGCAACC CTTGCTTCAG TATTTGGAAG 6300

TCCCAGCAAC AGCTCGTGCA AGTTTTTATA TCTACAATAC CAAGGCAGAT TGCGACAAAC 6360

TAGTCGATGC CCTACAAAAG ACAAAGGAGT TTTTCAATGG CACTTTCTAA ACTAGATAGC 6420

CTTTATATGG CAGTGGTAGC AGACCATTCG AAAAATCCAC ATCACCAAGG GAAGTTAGAA 6480

GATGCTGAGC AAATCAGTCT CAACAATCCG ACTTGTGGGG ATGTCATCAA CCTCTCTGTC 6540

AAGTTTGATG CAGAGGACCG TTTGGAAGAT ATTGCTTTTC TAAATTCAGG ATGCACGATT 6600

TCAACTGCTT CTGCTAGTAT GATGACAGAT GCCGTTTTAG GAAAAACCAA ACAAGAAATT 6660

TTAGAACTGG CGACTATTTT TTCTGAAATG GTTCAAGGGC AAAAAGATGA GCGTCAAGAC 6720

CAACTTGGAG ACGCGGCATT CTTGTCAGGT GTTGCCAAAT TCCCTCAAAG AATCAAGTGT 6780

GCAACCCTAG CTTGGAATGC CCTTAAGAAA ACAATTGAAA ATCAAGAAAA ACAGTAAGAC 6840

AAGTTTCTTT TGTCTTATGA ATTATTAGAA ATGAAGAAAG AAAGGATACT ATGGCTGAAG 6900

AAAGAGTAGA ACCAAAACCA ATTGACCTTG GTGAATATAA ATTTGGTTTC CATGACGATG 6960

TAGAGCCTGT CTTATCGACA GGAAAAGGAC TCAACGAAGG TGTTATTCGT GAATTATCTG 7020

CTGCTAAGGG TGAGCCTGAG TGGATGTTGG AGTTCCGTTT GAAGTCTTAT GAAACCTTCA 7080

AAAAAATGCC CATGCAAACT TGGGGAGCAG ACTTGTCAGA GATTGACTTT GATGACTTAA 7140

TCTACTACCA AAAACCATCT GACAAACCAG CCCGTTCTTG GGATGATGTA CCTGAAAAGA 7200

TTAAAGAAAC CTTTGAACGT ATCGGGATTC CAGAAGCTGA ACGTGCTTAT TTAGCAGGGG 7260

CTTCTGCCCA GTACGAGTCA GAAGTGGTTT ACCACAACAT GAAGGAAGAG TTCCAAAAAT 7320

TAGGTATTAT CTTTACAGAT ACAGATTCCG CACTCAAGGA ATACCCAGAC TTATTTAAAC 7380

AATACTTTGC GAAGTTGGTA CCGCCGACAG ATAACAAGTT GGCAGCCCTC AACTCAGCAG 7440

TATGGTCGGG TGGAACTTTT ATCTACGTGC CAAAAGGTGT CAAGGTAGAT ATTCCACTTC 7500

AAACTTATTT CCGTATCAAT AACGAAAATA TAGGTCAGTT CGAACGTACC TTGATTATCG 7560

TTGATGAGGG AGCAAGCGTC TACTACGTAG AAGGATGTAC AGCACCAACA TATTCAAGCA 7620

ATAGCTTACA CGCTGCCATT GTAGAAATTT TTGCTTTGGA CGGAGCTTAT ATGCGTTATA 7680

CAACTATCCA AAACTGGTCT GATAACGTCT ATAACTTGGT AACAAAGCGT GCTAAGGCTC 7740

AAAAGGATGC CACTGTTGAG TGGATTGATG GAAACTTGGG TGCCAAAACG ACTATGAAAT 7800

ATCCATCTGT TTACCTTGAT GGAGAAGGAG CGCGTGGTAC CATGCTCTCT ATCGCCTTTG 7860

CTAATGCAGG GCAACACCAA GACACGGGTG CTAAGATGAT TCACAATGCT CCACATACCA 7920

GCTCGTCTAT TGTGTCTAAA TCCATCGCTA AAGGTGGAGG AAAGGTTGAC TACCGTGGAC 7980

AAGTCACCTT TAACAAGAAC TCTAAGAAAT CTGTTTCCCA CATTGAATGT GATACCATTA 8040

TCATGGATGA CTTGTCAGCA TCAGATACTA TTCCATTTAA TGAAATTCAC AACTCGCAAG 8100

TGGCTTTGGA ACACGAAGCC AAAGTATCTA AGATTTCAGA AGAGCAATTG TATTATCTCA 8160

TGAGCCGTGG ATTGTCAGAA TCTGAGGCAA CTGAAATGAT TGTCATGGGA TTTGTAGAAC 8220

CCTTTACAAA AGAACTTCCA ATGGAATACG CAGTTGAGCT GAACCGCTTG ATTAGCTATG 8280

AAATGGAGGG ATCAGTTGGA TAAAATTTGA TTTTATACTC TTCGAAAATC TCTTCAAACC 8340

ACGTCAGCAT CGCCTTACCG TATGTATGGT TwCTGAtTCG TCAGTTTCAT CTACAACCTC 8400

AAAACAGTGT TTTGAGCAAC tGCGGCTAGC TTCCTAGTTT GTTCTTTGAT TTTGAGTATT 8460

AGATTTACTC AAAATCAAGG ATTTTGAAGA TGAACTTGTA TCAAAAAATC GCGGTTTAAA 8520

ATCGCGATTT TTTATAATTT CTCGTTAACA AAGCGGACAA ACTGATTCCA CCAAACTTTT 8580

AAGAAGAAGG CTTTTTCAAT TTTCTTGTCT GCTACCATTT CGAAACTAGG GCGCTCTGTG 8640

GTGATGTAAC CTTGACCAAT CAAGTCCTTG TCTTCATAAG TCAAATGGCC AACCACTGTT 8700

CCAGCTTCAA GTGGTGCTGG GATTGCTTTG GAATCAGGTG TGAATTGAAC AGATTGGGAA 8760

GATTGATTCC CAACACGTTC GATTAGATAG ATATCCTCTG GAGCCACTGC AGTTACTGTA 8820

TCTTCTTTTC CATCTTGTAC AGGGGCTTTG CTATCTTGAT AGGCATCGCC TTGTTGAACG 8880

ATTTTGCGAA GTGTAAATGT AGAAGAAATA TAATCCATTA GGGAAGATGT AGCTGTAAAT 8940

CGAGCGTAAG GATTATTGTC TTGATGATCT GCATTTAAAA CAACTGTGAT GACTCTCATG 9000

CCTTTTTCGA CAGTAGTACC AACAAAAGAC TCTCCAGCCT TATCTGTTGT TCCTGTTTTT 9060

AGCCCATCAA AACCACCACG GTAAGCAGGC ATACCTTCTA ACATGTAGTT GGTTGAAGTG 9120

ATTGTCATCC CAGCAAAAGT AGAAGAAGGT TTTTTGGTGA TTTCTAAGAC TTGTGGGTAT 9180

TTTTTGATGA GGTTGCGAGC AACGATAGCG ACATCATAAG CACTAAGCTT ATTTTCCTCA 9240

TCTTTTTTAG AACCTGGGTA AATGTTATCC CCTAGAGTTT CATTGTTAAG ACCTGTCGTA 9300

TTGACAACAG TGGCATCCTG AATTCCCCAT TCCAAGAGTT TTGCCCGCAT CATATCGACG 9360

AAATCTTTTT CTGAGCCAGC AATTTTCTCA GCTAGGGCAA TAGCGGCGCT GTTGGCACTA 9420

GATACCAGAG TTGCTTCAAG CAACTCTTCG ACAGTATAAT TACGGGCCTC CATAGGAATA 9480

TTACTGGCTT CAGAATTTGT CGTCAATTGA TAAGGATAAT CAGAAATATC TACAGGAGTG 9540

GAGAGGGTAA TACTTCCGTT TTCCAAAGCT TCATAGACCA GATAAACAGT AATCAATTTT 9600

GTTATGGAAG CAATTTCGAC AGGTTGCGTT GCATCCTTCT CATAGAGAAT TTTACCAGTA 9660

TTTGCCTCAA CAGCAATCGC ATGTTTAGCG GCAATGGTAA AATCTTGAGC AACAGCAGTA 9720

GAAGCACCCC CTAAAAGAGA GACAGTTAAC AAAGTTAAAA ATATTTTTTT CATAGTAGTC 9780

TTATTCTATC ATAAAGAAAA AAAATATTCT TGCTTTAATA ATTCATCTGT TAAGCTTTTT 9840

GAAAATATGG TAAAATAAAG TAAGGGAGGT AACTCATGTT TCGTAGAAAT AAATTATTTT 9900

TTTGGACCAC AGAAATTTTA CTCTTAACCA TCATCTTTTA CCTATGGAGA CAGATGGGGT 9960

CTTTGATTAA CCCTTTTGTT AGCGTGCTTA ATACAATTAT GATTCCATTT TTATTAGGGG 10020

GCTTTTTTTA TTATTTGACA AACCCTATTG TTACTTTCTT AAATAAAGTC TGTAAACTCA 10080

ATCGTTTGCT TGGTATTTTA ATTACCTTGT GTACTTTGGT CTGGGGAATG GTCATAGGTG 10140

TTGTCTATCT CTTACCTATT TTGATTAATC AGTTATCTAG TTTGATTATA TCTAGTCAAA 10200

CTATTTATAG TCGAGTACAA GACTTAATCA TAGACTTATC TAATTATCCT GCGCTCCAGA 10260

ATTTGGATGT AGAAGCTACA ATTCAGCAGT TAAACTTATC CTATGTTGAT ATTCTTCAAA 10320

ATATCCTAAA TAGCGTATCA AATAGTGTGG GGAGCGTCTT GTCAGCTCTT ATCAGTACTG 10380

TTTTGATTTT GATTATGACT CCAGTTTTTT TGGTTTATTT CTTATTAGAT GGACATAAAT 10440

TCTTGCCCAT GCTTGAAAGA ACGATTCTAA AGAGGGATCG CTTGCATATT GCAGGCTTAT 10500

TAAAGAATTT AAATGCGACG ATTGCTCGCT ATATTAGTGG AGTTTCGATT GACGCAATCA 10560

TTATAGGTTG TTTGGCTTAT ATTGGCTATA GTATTATTGG TTTAAAATAT GCTTTAGTTT 10620

TTGCCATTTT TTCTGGTGTA GCCAATTTAA TTCCTTATGT GGGGCCAAGT ATTGGTTTGA 10680

TTCCTATGAT CATCGCAAAT ATATTCACTG ATCCCCATAG ACTGCTGATT GCAGTGATTT 10740

ATATGCTTGT TGTTCAGCAG GTAGATGGCA ATATCTTATA TCCTCGAATC GTAGGAAGTG 10800

TTATGAAGGT TCATCCAATC ACGATTTTAG TTTTACTTTT GTTGTCAAGC AATATCTATG 10860

GTGTAGTTGG AATGATTGTC GCAGTGCCAA CCTATTCTAT CTTGAAAGAA ATTTCTAAGT 10920

TCTTATCCCA TTTGTATGAA AATCATAAAA TAATGAAAGA ACGAGAAAGA GAATTAGCTA 10980

AGTAAAAGTC AGGAGAACCC TGATTTTTCT TTACTGGAAG TGGCCTTTAG ATTAGAAGAC 11040

TGAAAATAAG TTAAAGTCTT AAACTAATTT TCACAGCTAA GAATAGTAGA AGTTAATCTG 11100

ATAAAAATCG AAAAAACCAG TGGAATTCTG TGTCAGGGTA AGTTCCACTG GTTTTCATAG 11160

TCTATTAAAG TTCGAATGAA ACCTATTTAT AGTAGATTGA AACTAGAATA GTACACCTCT 11220

AATTCTAAAA CATTGTTAGA AATCGATTTG ACTGTCCTGA TCTATTCGTT CTATTCTTAT 11280

TTCATTTTAC TATATTTTGG TGCAATAAGT GAAAAGTAGT CCGAATAATA TAAGGATTGA 11340

TTTTATAGTT TTTAAACTCA AATGAATTGA AATAAAGAGA GTACGAAAAT TCTCATCTGA 11400

AAGTATTTTA GAATAATTCT CTTCGTGAAT TTCTTCAAAA CAGATAGCTT CATCTTAGGT 11460

ATGTGATTTC TTTTTGCATT TTTGAGTTAG ATAAGGTATA ATGATTTTAT TGTCTTTTGG 11520

GGTCGTTACG GATTCGACAG GCATTATGAG GCATATTTTG CGACTCGTGT GGCGACGTAA 11580

ACGCTCAGTT AAATATAACT GCAAAAAATA ACACTTCTTA CGCTCTAGCT GCCTAAAAAC 11640

CAGCAGGCGT GACCCGATTT GGATTGCTCG TGTTCAATGA CAGGTCTTAT TATTAGCGAG 11700

ATACGATTAA GCCTTGTCTA GCGGTTTGAT AAGAGATTGA TAGACTCGCA GTTTCTAGAC 11760

TTGAGTTATG TGTCGAGGGG CTGTTAAAAT AATACATAAC CTATGGTTGT AGACAAATAT 11820

GTTGGCAGGT GTTTGGACGT GGGTTCGACT CCCACCGGCT CCATTATTCC TTTGCATTCT 11880

TTTGCATTCC TTGGTAAAAC GTTGTTAAAT CAACGTTTTT TATTTTTATC TTTGGTATTC 11940

CTTTGCATTC TTTTGCTAAA AAGGGAGTCA CAAACAGACC CTATTTTAAA AAAGGATAGA 12000

AAAAAGGATA CAACATTTGT CGCATCCTAA AAATAATCTT TTTTCGACGG AAGACATGGG 12060

ATTCGAACCC ACGCACGCTA TTACACGCCT ACCGCGTTTC CAACACGGCC TCTTAAGCCT 12120

CTTGAGTAAT CTTCCAATAC TTACTCAAAT AGTCTACCAT AAAGGCTCTT ATCTTGCAAT 12180

AAAAATTCTA GAAATAAGAA AAATGATAGA TTTTGAAAGA AAATGATAAA AAATGCTTGA 12240

CTTCGAAAGA AAGTATGATA GAATGAATAG TGTAAACGAT AACAGGAGGT GATTCAGTGT 12300

TAAAAACAGA ACGTAAACAA CTAATTTTAG AGGAGTTAAA TCAACATCAT GTAGTTTCTC 12360

TAGAAAAATT AGTTAGTTTG CTAGAAACGT CAGAATCAAC GGTTCGAAGA GACTTGGATG 12420

AGTTGGAAGC GGAAAACAAG CTTCGTCGTG TGCATGGTGG AGCAGAACTC CCCTACTCCT 12480

TACAGGAAGA AGAAACCATT CAAGAAAAAT CTGTCAAAAA CCTTCAAGAA AAGAAATTGC 12540

TGGCTCAGAA AGCAGCCTCT CTCATTAAAG AAAAAGATGT CATCTTTATC GATGCTGGAA 12600

CAACAACTGC TTTTTTGATT CATGAATTGG TCAATAAGAA TGTTACAGTT GTGACCAACT 12660

CCATTCACCA TGCCGCTCAG TTGGTTGAAA AGCAGAwTCC AACTGTCATG GTTGGAGGAA 12720

ACGTCAAGAC GGCGACAGAT GCTAGTATCG GGGGCGTTGC TCTTAACCAG ATTAACCAAT 12780

TGCACTTTGA CCGTGCCTTT ATCGGAATAA ATGGTGTTGA CGATGGCTAT TATACGACTC 12840

CTGATATGGA GGAGGGAGCT GTGAAAAGAG CTATTTTGGA GAATGCCAAG CAGACCTACG 12900

TCTTGGTGGA TTCGTCAAAA ATTGGACAAA CTTGCTTTGC CAAGGTAGCC CCACTCAAAC 12960

GCGCTATCGT TATCACTAGT CAAGGGCATG AGCTCTTGCA GGTTATTAAG GAGAAAACGG 13020

AGGTAATAGA AGTATGATTT ATACAGTCAC ACTCAATCCA TCCATTGACT ATATCGTTCG 13080

TTTGGACCAA GTCAAAGTTG GTAGTGTCAA TCGTATGGAC AGTGATGATA AGTTTGCTGG 13140

TGGGAAAGGA ATCAATGTCA GCCGTGTCTT GAAACGTTTG AATATACCAA ATACAGCGAC 13200

GGGATTTATC GGTGGCTTTA CTGGTAAATT TATCACAGAT ACTTTAGCAG AGGAAGAAAT 13260

CGAGACACGT TTTGTCCAGG TGGCAGAAGA TACTCGTATC AATGTTAAAA TCAAAGCAGA 13320

CCAAGAAACA GAAATCAACG GAACGGGTCC AACTGTTGAA TCGGTTCAGC TAGAAGAATT 13380

GAAAGCTATT TTATCTAGTC TGACAGCAGA AGATACAGTT GTCTTTGCAG GTTCAAGTGC 13440

TAAAAATCTA GGCAATGTTA TCTATAAGGA TTTGATTTCC TTGACGCGCC AGACTGGTGC 13500

GCAAGTGGTC TGTGACTTTG AAGGACAGAC CTTAATTGAT AGTTTGGACT ACCAGCCTCT 13560

TCTTGTAAAA CCAAACAATC ATGAACTTGG AGCGATTTTT GGGGTTAAAC TCGAAAGTTT 13620

AGATGAAATT GAGAAATACG CTCGTGAGTT ACTGGCTAAG GGTGCTCAAA ATGTTATTAT 13680

CTCTATGGCT GGTGATGGTG CCCTTCTTGT CACATCTGAG GGAGCTTACT TCGCTAAACC 13740

AATCAAAGGA ACAGTCAAAA ATTCAGTTGG AGCTGGTGAT TCTATGGTTG CTGGATTCAC 13800

AGGTGAATTT GTCAAATCAA AAGACGTAGT AGAAGCCTTC AAATGGGGAG TGGCTTGCGG 13860

AACGGCAACT ACCTTCTCAG ATGACTTGGC AACGGCGGAA TTTATTAAAG AAACATATGG 13920

AAAAGTTGAG GTAGAAAAAC GATGAAAATT CAAGACCTAT TGAGAAAAGA TGTCATGTTG 13980

CTAGATTTGC AGGCAACTGA AAAAACAGCT GTCATCGACG AGATGATTAA AAATTTGACA 14040

GACCACGGTT ATGTAACAGA TTTTGAAACA TTTAAAGAAG GAATTTTGGC GCGTGAAGCT 14100

TTGACTTCTA CTGGTTTGGG TGATGGAATC GCAATGCCTC ACAGCAAAAA CGCTGCTGTC 14160

AAAGAAGCGA CAGTTCTATT TGCTAAGTCA AATAAGGGTG TTGACTACGA GAGCTTGGAT 14220

GGACAAGCAA CTGACCTCTT CTTCATGATT GCAGCTCCAG AAGGTGCCAA TGATACTCAC 14280

TTGGCAGCCT TGGCAGAATT GTCTCAATAC TTGATGAAAG ACGGTTTTGC AGACAAACTT 14340

CGTCAAGCAA CATCTGCAGA CCAAGTTATC GAACTTTTTG ACCAAGCTTC AGAAAAAACT 14400

GAGGAACTTG TTCAAGCACC TGCTAATGAC TCTGGTGACT TTATCGTAGC TGTTACAGCT 14460

TGTACAACAG GTATTGCCCA CACTTACATG GCCCAAGAAG CCCTTCAAAA AGTAGCTGCT 14520

GAAATGGGGG TTGGTATCAA GGTCGAAACC AACGGTGCTA GCGGTGTTGG AAATCAACTA 14580

ACTGCAGAAG ATATCCGTAA GGCTAAAGCT ATTATCATTG CAGCAGACAA GGCCGTTGAA 14640

ATGGATCGAT TTGATGGAAA ACCATTGATC AATCGTCCAG TTGCTGACGG TATCCGTAAG 14700

ACAGAAGAGC TAATTAACTT GGCTCTTTCA GGAGATACTG AAGTCTACCG TGCCGCTAAT 14760

GGTGCCAAAG CTGCAACAGC CTCTAACGAA AAACAAAGCC TTGGTGGTGC CTTGTACAAA 14820

CACTTGATGA GTGGTGTATC TCAAATGTTA CCATTCGTTA TCGGTGGTGG TATCATGATT 14880

GCCCTTGCCT TCTTGATTGA CGGTGCTTTG GGTGTTCCAA ATGAAAACCT TGGCAATCTT 14940

GGTTCTTACC ATGAGTTAGC TTCTATGTTC ATGAAAATTG GTGGAGCTGC CTTTGGTTTG 15000

ATGCTTCCAG TCTTTGCGGG TTATGTTGCC TACTCTATTG CTGAAAAACC GGGTTTGGTA 15060

GCAGGTTTCG TGGCTGGTGC TATTGCCAAA GAAGGTTTTG CCTTTGGTAA AATTCCTTAT 15120

GCCGCAGGTG GTGAAGCAAC TTCAACTCTT GCAGGTGTCT CATCTGGTTT CCTAGGTGCC 15180

CTTGTTGGTG GATTTATCGC AGGTGCCTTG GTTCTTGCCA TCAAGAAATA CGTTAAAGTT 15240

CCTCGTTCAC TCGAAGGTGC TAAATCAATC CTTCTATTGC CACTTCTTGG AACAATCTTG 15300

ACAGGATTTG TTATGCTAGC TGTGAATATC CCAATGGCTG CAATCAACAC TGCTATGAAT 15360

GACTTCCTAG GCGGTCTTGG AGGAGGTTCA GCTGTCCTTC TTGGTATCGT CCTTGGTGGA 15420

ATGATGGCTG TTGACATGGG TGGACCAGTT AATAAAGCAG CTTATGTCTT TGGTACAGGT 15480

ACGCTTGCAG CAACTGTTTC TTCAGGTGGT TCTGTAGCCA TGGCAGCAGT TATGGCTGGA 15540

GGAATGGTGC CACCACTTGC AATCTTTGTC GCAACTCTTC TTTTCAAAGA TAAATTTACT 15600

AAGGAAGAAC GTAACTCTGG TTTGACAAAC ATCATCATGG GCTTGTCATT TATCACTGAG 15660

GGAGCGATTC CATTTGGTGC CGCTGACCCA GCTCGTGCGA TTCCAAGCTT CATCCTTGGT 15720

TCAGCAGTAG CAGGTGGACT CGTTGGTCTT ACTGGTATCA AACTCATGGC GCCACACGGA 15780

GGAATCTTCG TTATCGCCCT TACTTCAAAT GCTCTCCTTT ACCTCGTTTC TGTCTTGGTA 15840

GGAGCAATCG TAAGTGGTGT GGTTTATGGT TACCTACGCA AACCACAAGC ATAAAAAATA 15900

GAAAAATGAA AAGATTGGAC CGTTTGGTGC AGTCTTTTTC TCTTCCCGAA ATGCCTGTGA 15960

AATATGGTAT AATAGAAGAA TGGCAAACAA GAATACAAGT ACAACAAGAC GGAGACCGTC 16020

TAAAGCAGAA CTGGAAAGAA AAGAAGCGAT TCAACGAATG TTGATTTCGT TAGGAATTGC 16080

GATTTTATTG ATTTTCGCAG CCTTCAAATT AGGGGCTGCA GGTATAACCC TTTATAATTT 16140

AATTCGCTTG CTAGTGGGTA GCCTAGCTTA TCTGGCGATA TTCGGCCTAT TAATCTATCT 16200

CTTCTTTTTC AAGTGGATAC GAAAACAGGA AGGACTCTTA TCTGGCTTTT TCACCATATT 16260

TGCTGGCTTA CTCTTGATTT TTGAGGCCTA CTTGGTTTGG AAATATGGTT TGGACAAGTC 16320

CGTTCTAAAA GGGACCATGG CTCAGGTTGT GACAGATCTG ACTGGTTTTC GAACGACTAG 16380

CTTTGCTGGA GGGGGCTTGA TCGGGGTCGC TCTTTATATT CCAACAGCCT TTCTCTTTTC 16440

AAATATCGGA ACTTACTTTA TTGGTTCTAT CTTGATTTTA GTGGGTTCTC TCCTAGTCAG 16500

CCCTTGGTCT GTTTACGATA TTGCTGAATT TTTCAGTAGA GGCTTTGCCA AATGGTGGGA 16560

AGGGCACGAG CGTCGAAAAG AGGAACGCTT TGTCAAACAA GAAGAAAAAG CTCGCCAAAA 16620

GGCTGAGAAA GAGGCTAGAT TAGAACAAGA AGAGACTGAA AAAGCCTTAC TCGATTTGCC 16680

TCCTGTTGAT ATGGAAACGG GTGAAATTCT GACAGAGGAA GCTGTTCAAA ATCTTCCACC 16740

TATTCCAGAA GAAAAGTGGG TGGAACCAGA AATCATCCTG CCTCAAGCTG AACTTAAATT 16800

CCCTGAACAG GAAGATGACT CAGATGACGA AGATGTTCAG GTCGATTTTT CAGCCAAAGA 16860

AGCCCTTGAA TACAAACTTC CAAGCTTACA ACTCTTTGCA CCAGATAAAC CAAAAGATCA 16920

GTCTAAAGAG AAGAAAATTG TCAGAGAAAA TATCAAAATC TTAGAAGCAA CCTTTGCTAG 16980

CTTTGGTATT AAGGTAACAG TTGAACGGGC CGAAATTGGG CCATCAGTGA CCAAGTATGA 17040

AGTCAAGCCG GCTGTTGGTG TAAGGGTCAA CCGCATTTCC AATCTATCAG ATGACCTCGC 17100

TCTAGCCTTG GCTGCCAAAG ATGTCCGGAT TGAAGCACCA ATCCCTGGGA AATCCCTAAT 17160

CGGAATTGAA GTGCCCAACT CCGATATTGC CACTGTATCT TTCCGAGAAC TATGGGAACA 17220

ATCGCAAACG AAAGCAGAAA ATTTCTTGGA AATTCCTTTA GGGAAGGCTG TTAATGGAAC 17280

CGCAAGAGCT TTTGACCTTT CTAAAATGCC CCACTTGCTA GTTGCAGGTT CAACGGGTTC 17340

AGGGAAGTCA GTAGCAGTTA ACGGCATTAT TGCTAGCATT CTCATGAAGG CGAGACCAGA 17400

TCAAGTTAAA TTTATGATGG TCGATCCCAA GATGGTTGAG TTATCTGTTT ACAATGATAT 17460

TCCCCACCTC TTGATTCCAG TCGTGACCAA TCCACGCAAA GCCAGCAAGG CTCTGCAAAA 17520

GGTTGTGGAT GAAATGGAAA ACCGTTATGA ACTCTTTGCC AAGGTGGGAG TTCGGAATAT 17580

TGCAGGTTTT AATGCCAAGG TAGAAGAGTT CAATTCCCAG TCTGAGTACA AGCAAATTCC 17640

GCTACCATTC ATTGTCGTGA TTGTGGATGA GTTGGCTGAC CTCATGATGG TGGCCAGCAA 17700

GGAAGTGGAA GATGCTATCA TCCGTCTTGG GCAGAAGGCG CGTGCTGCAG GTATCCACAT 17760

GATTCTTGCA ACTCAGCGTC CATCTGTTGA TGTCATCTCT GGTTTGATTA AGGCCAATGT 17820

TCCATCTCGT GTAGCATTTG CGGTTTCATC AGGAACAGAC TCCCGTACGA TTTTGGATGA 17880

AAATGGAGCA GAAAAACTTC TTGGTCGAGG AGACATGCTC TTTAAACCGA TTGATGAAAA 17940

TCATCCAGTT CGTCTCCAAG GCTCCTTTAT CTCGGATGAC GATGTTGAGC GCATTGTGAA 18000

CTTCATCAAG ACTCAGGCAG ATGCAGACTA CGATGAGAGT TTTGATCCAG GTGAGGTTTC 18060

TGAAAATGAA GGAGAATTTT CGGATGGAGA TGCTGGTGGT GATCCGCTTT TTGAAGAAGC 18120

TAAGTCTTTG GTTATCGAAA CACAGAAAGC CAGTGCGTCT ATGATTCAGC GTCGTTTATC 18180

AGTTGGATTT AACCGTGCGA CCCGTCTCAT GGAAGAACTG GAGATAGCAG GTGTCATCGG 18240

TCCAGCTGAA GGTACCAAAC CTCGAAAAGT GTTACAACAA TAAAAAAATA GCTTCTTTCC 18300

AAGTTTGGAG GGAAGCTATT TTAGTGGCTA TTGATTGCTT TTATTTTCTG AAGTTGGCGC 18360

ATTGGACTGT TTTTCGTTTT CAGTAGCAGG TTTACTTGAA GCAGGAGTAG AAGAGTCCTG 18420

AGTTGCTGTT TTCTGATCTT CTTTTTTCTC TTCCTTGACG CTAGATTTTG GTGTTTCCTC 18480

TTGCTGTGTT TTTTCTTGAC TAGTGTTAGT CTCTTTAGTT GGACTGGTGT TTTCCTTAGG 18540

GGATTCCTTT TGGATTTCTT TGACAATGGT TGTCGTCTGG CTTGTCGTAG GTTCTTTTTT 18600

AATATTTTTG TTATTATCCA AGGCGTT 18627

(2) INFORMATION FOR SEQ ID NO: 114:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 2560 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 114:

TAAAATACGT TACCTTGCTT CTGCACGTTC AGCAGGTAAG TCATTGAAAT TTAAAGATCA 60

AGATATTACA ATTGAAGAAA CGACTGAAAC AGCTTTTGAA GGAGTTGATA TTGCTCTCTT 120

TTCAGCAGGT AGTTCTACAT CAGCTAAGTA TGCACCATAC GCAGTAAAAG CTGGCGTGGT 180

AGTAGTAGAT AATACATCTT ATTTCCGTCA AAATCCAGAT GTTCCTTTGG TTGTTCCAGA 240

GGTCAATGCT CATGCACTTG ATGCTCACAA CGGAATCATT GCCTGCCCTA ATTGTTCAAC 300

AATTCAAATG ATGGTGGCTC TTGAGCCGGT TCGCCAAAAA TGGGGCTTGG ACCGTATCAT 360

TGTTTCAACT TATCAAGCCG TTTCAGGTGC TGGTATGGGA GCAATTCTTG AGACACAACG 420

TGAACTTCGT GAAGTCTTGA ATGATGGTGT GAAACCACGT GATTTGCATG CGGAAATCTT 480

GCCTTCAGGT GGTGACAAGA AACATTATCC TATCGCCTTT AACGCTCTTC CACAAATTGA 540

TGTTTTCACT GATAATGATT ACACGTACGA AGAGATGAAG ATGACCAAGG AAACTAAGAA 600

AATTATGGAA GATGATAGCA TTGCAGTATC TGCAACATGT GTGCGTATTC CAGTCTTGTC 660

AGCTCACTCT GAGTCTGTTT ATATCGAAAC AAAAGAAGTG GCTCCAATCG AAGAAGTAAA 720

AGCAGCTATC GCAGCCTTCC CAGGTGCTGT TCTTGAAGAT GATGTAGCTC ATCAAATCTA 780

TCCTCAAGCT ATCAATGCAG TTGGTTCGCG TGATACCTTT GTTGGTCGTA TCCGTAAAGA 840

CTTGGATGCA GAAAAAGGAA TTCACATGTG GGTTGTTTCA GATAACCTTC TCAAAGGTGC 900

TGCTTGGAAC TCAGTTCAGA TTGCTGAAAC TCTTCATGAA CGTGGATTGG TTCGTCCAAC 960

AGCCGAATTG AAATTTGAAT TAAAATAGTC ATATCGTTTA GGAGTTCAGA TGAACTCCTT 1020

CTTTGAAATA GAGAGGTGTT TTCGTGTCTT ATCAAGATTT AAAAAAATGT AAAATCATTA 1080

CAGCCTTTAT TACCCCCTTC CATGAGGATG GTTCCATTAA CTTTGATGCT ATTCCAGCCT 1140

TGATTGAGCA TTTATTGGCC CATCATACGG ATGGAATTCT TCTCGCAGGA ACGACTGCTG 1200

AGAGTCCAAC TTTGACCCAC GATGAGGAGT TGGAGTTGTT TGCGGCTGTA CAAAAGGTTG 1260

TCAATGGACG CGTTCCTTTG ATTGCGGGTG TAGGTACTAA TGATACGCGT GACTCTATTG 1320

AGTTTGTCAA AGAAGTAGCG GAATTTGGTG GTTTCGCAGC TGGGCTTGCT ATTGTTCCTT 1380

ACTACAACAA ACCTTCTCAA GAAGGGATGT ATCAGCACTT TAAGACTATT GCAGATGCTT 1440

CTGACCTACC AATTATTATC TATAACATTC CAGGGCGTGT AGTTGTCGAA TTGACTCCAG 1500

AAACCATGCT TCGCTTGGCT GACCATCCAA ATATTATCGG TGTCAAAGAA TGTACTAGCT 1560

TGGCTAATAT GGCTTACTTG ATTGAGCACA AGCCTGAAGA GTTCTTGATT TATACAGGTG 1620

AGGATGGAGA TGCTTTCCAT GCCATGAACC TTGGGGCGGA TGGGGTTATT TCTGTTGCCT 1680

CTCATACAAA TGGGGATGAA ATGCACGAGA TGTTTACTGC GATTGCAGAA AGCGATATGA 1740

AGAAAGCCGC AGCAATTCAG CGTAAATTCA TTCCTAAGGT TAATGCTCTC TTCTCTTATC 1800

CAAGTCCTGC TCCAGTTAAG GCAATTCTTA ACTATATGGG ATTTGAAGCT GGACCCACTC 1860

GTCTACCTCT TGTTCCAGCA CCAGAAGAAG ATGCCAAACG CATTATCAAG GTTGTCGTAG 1920

ATGGCGACTA CGAAGCAACT AAGGCAACTG TAACAGGGGT CTTAAGACCA GATTACTAAT 1980

AAAGACAATA AAATCCGGCT CTTTGTCAAC TGTAGTGGGT TGAAGTCAGC TAAGCTCGAG 2040

AAAGGACAAA TTTTGTCCTT TCTTTTTTGA TATTCAGAGC GATAAAAATC CGTTTTTTGA 2100

AGTTTTCAAA GTTCCGAAAA CCAAAGGCAT TGCGCTTGAT AAGTTTGATG AGATTATTGG 2160

TCGCTTCCAA TTTGGCGTTT GAATAGGGTA GTTGAAGGGT GTTGACGATT TTCTTTTTGT 2220

CCTTTAGAAA GGTTTTAAAG ACAGTCTGAA AAATAGGATG AACCTGCTTC AGATTGTCCT 2280

CAATGAGTCC GAAAAATTTC TCCGGTTCCT TATTCTGAAA GTGAAACAGC AAGAGTTGAT 2340

AGAGCTGATA GTGATGTTTC AAGTTTTGTG AATAGCTCAA AAGCTTGTTT AAAATCTCTT 2400

TATTGGTTAA GTGCATACGA AAAGTAGGAC GATAAAATCG CTTATCACTC AGTTTACGGC 2460

TATCCTGTTG AATGAGTTTC CAGTAGCGCT TGATAGCCTT GTATTCGGGA TTTTCGATGA 2520

AACTGATTCA TGATTTGGAC ACGCACACGA CTCATAGCAC 2560

(2) INFORMATION FOR SEQ ID NO: 115:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 11303 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 115:

TATTGGATTT CCCTTGCAAT CAGTTTATGG GACAAGCACC CGGCAGCGCA GAGGAAATCA 60

ACGCCTTCTG TAGCCTACAT TTTCAAACCA CCTTCCCACG TTTTGCCAAG ATTAAGGTCA 120

ACGGTAAGGA AGCAGACCCT CTCTATGTCT GGTTACAAGA CCAGAAATCC GGCCCACTAG 180

GAAAACGAGT CGAATGGAAT TTCGCTAAGT TTCTCATCGG TCGAGATGGG CAAGTCTTTG 240

AACGCTTTTC TTCAAAAACA GACCCAAAAC AAATTGAAGA GGCGATACAA ACTCTACTAT 300

AATTCACAAT CTCACTATGA TTAGGTTTCC TTTAACCTGA TGAATAGTGA GATTTTTTGA 360

TGGGCTTTGA CTTAAATAGA AAAACACCCC ATGATATGAA ACATGAAGTG TTGTAAAGTC 420

TATGTTGTAG GTGCTTATTT CACAATTTCA ATGTGACCAG TGATAACGAA TACCATACAG 480

AATCTTCATA TACACTAAAC AAATGACTTT CTAATTATTT CAATTAGTTT TGGCTAGTAA 540

ATATCATTTC CAACAAACGC CCTCTCAATT CCTTATCCTG ATGATGCAAG ATATTCATTA 600

AGTCATGAGA GTTTTTCGCA TTGATGAATT GATTTAACAA TCTATCTTTT AATTCATATG 660

GAAGAGAAGC TGTCTTTAGT AGTCTAAAAA CTTCGTCATT TAAAGATGTC CTTTTATTAT 720

CTTTCCATTC AAATTTAGCT GTATCATTCT TATTTGGCAA TTCAATTATA GACACATTCG 780

TTCCTTTAAA ATGAATTCTA TGTTTTCTAT TGCTTGGAAC GATACTAGAA TCTCCTTGTA 840

ATGCTAACTC TACCATTCCC ATTTCCCAAT CGATTGATAA TCTTGTTTTA TATCTTTGAC 900

CATTTTGATC TTCAAGCATT TCAAAAGAAT GTTGTTTTCC TGGGAATACA TACCAATCTA 960

CAACTTCAGG TAAATCAACA CCCATACCTA TCTCAGAACC AACCAAGGGA ATGATTGCAC 1020

CACTTTTTGC AAACACAGGC GTAGTCGAGA TGTCCCTATA AACACTTAAC TTCACACCAC 1080

CTGTGTATTT TTTCTCTGAA AAGAAGTCAT ACCATTCACC TTCAGGGAAC CATACATCTA 1140

CTTTTGCAGA TTGGAATGTC AAATCCATCT TTTCTACAAT GGGAGCCACC ATCAGTTCTG 1200

TTCCAAAAAA GTATTGGTTT GGAACATTAT AGCTCTCATC ATTCTCTGGA TAGAAATAAT 1260

AGATTGGACT GATTAATGGG GCACCTTCCT CATGTGTCTG TACATTCATG GTATATAGAT 1320

AGGGAATCAT CTGATGTCTC AAACGAAGGT ATTTCTTCAT AATCTTAGAT GTTGTTTCTG 1380

AAAAAAACCA AGGTTCTTTA CTATTAAAAG GACTTCTAGA ACTATGTAAT CGAGTAATCG 1440

GACTAAAAAC ACCAAACTGT AGCCATCTAG TTTGTAGCTC TTCGTCATAA TCCCCCAACA 1500

TATGTCCACC GATATCATGA CTCCACCAAC TATAACCGAT ATTAGATGCT GTCGCTGTAA 1560

AATAGGGTTG AAATCTTAAG GAATTCCAAC TAATAATAGT ATCCCCTGAA AAACCAACAG 1620

GGTAGCGGTG ACTACCAGGA CCTGCATATC TTGATAAAAT CAAACCACCT TCTGCATTTT 1680

TACAACTATC CTGATAGTGA TAATGGTTTA AAAGCCAAAG TGGATCTAGC ATACCTTGTG 1740

TCCCTTGTTG CCAGTCAATC CACCAAAAAT CTACTCCCTG CTTTTCTAGT TCATAATGAA 1800

CATCTTTAAA GTAGGCTTCC CTAAAAGAGG GATTAAAAAA ATCAAAAATA GCAGGTTCTT 1860

CTAGTTCTAC ATTTAACCCC AACCGTTTTG CGATTTGAGG ATAAGCTTCT TCATAAGCCC 1920

GTATCCCATC AGCAGGATGG ACATTTAAGG AGAGTTTTAG CTTTCTATCA TGAAGTTGTT 1980

GCAATAACTG TTCTGGATTT GGTATTAAGT TTCTATTCCA ACTATATCCT GTCCAGCCAC 2040

TTCCAAAGCG AGCTGGAATG TCAGTTATAT GCCAATCCAT ATCTAACACA CCGATAGATA 2100

ATGGAATTTT CTCTGTTTCA AATCTGTCTA TTAAATCCAA GTATTCATCC GACGTATAAG 2160

GCCAATATCT ACTCCACCAA TTGCCTAAAG CATATCTTGG CAACAAGGGT GTTGAACCAG 2220

TCAAATGGTA AAAATCTCTG ATTGCTCCTC TATAATCATG CCCATAGGCA AAGAAATACA 2280

GGTCAATTTG ATTTTCTCTC TCAATATAAC CAGATTGTTC ATCCCAAATA AATCCTTGAG 2340

AATCATCCAA TAAGGCTATA CCATTTCGGC TAATAATTCC ATCTTCTAAC GAGATTGCTC 2400

CATCTGCCTT ATCCAGAGTC CGAGCTGTTC CTTTTAACGT TTCAATAGAT TCACCAAAAT 2460

ACCAGCGACT ACCATATACG GCAAAATTTC CTTTTAATTC TATAAATAAA TTTTCGGCGT 2520

TAAATTCTCC TTTATTAAAG TGCAGATGAA AATAGTCCGT CATAATATCT AGTACGTTTG 2580

ATGTCTCGAT ATAATCTAAC GAAATTTGGC CAAAATCTCT ATTATAGATA AGTTGTGTCG 2640

TTCTATCCTC AAAACTTCCA GTTTGAGAGT ATTCTAACCT TACTAGCTTG TCTGTTAATA 2700

CAGAGATTCG ATAAAACTCT CCCTTAAAAA TTTTCAATTT GTTTTCCTCC TTTTATGGTA 2760

GCATAAAAAC AGAACGCACC ATTTTTGATG CGTTTTTCAT TATTCTGAAT GCAATGTTCT 2820

ATCTGTTATA TCTATGACAA ATAATAGTCA ATTGAAAAAA TGCAGTGGAC AAAATATCTT 2880

TTAACAAACC AAGAGTTTAT TAAAGAGTTA TCACTTTTCA ACTTTTCTAA GCTTATGCAG 2940

TTGTGAAACA AACTACTTTT AAACTATTAA CTAAGATAGG ATTGATAAAT AATTTCAAAC 3000

TCTTACTAGC AATCATACGA TATTCAAGCT CACGTGCTTT TTTCCTTCCT GCTTATTTCT 3060

TAGAACTGAA GAACCCGGAT CGGTATATAA ATTATCCGGA TCAACATAGT CATAAGATTC 3120

ATAACAGTTG CGCTTCATTA AGTCATCCCC AGAGCAAGAG CTTCATCTCG TAATTTTTCA 3180

ACATCACTAA CCGTAGGTCG CCATCCTTCA ATCATATTTG TACTTAAAGC ATACCAAACA 3240

CTCTTAAAAA CGGATCGGTT TTCAAAAGCT ATTCCCATGA TTGTCATCTT TTCTTTATCT 3300

ATATCTAAGG ACATATGCTA CCTCCTTTAG ATACATTATA CCATGTTTCT CTGTAGCTTT 3360

TAAAAATTTT ATTTTGTTTG TCATATCTAA GTTTTCAGCA CGCTTATCCT ATTTTATAAG 3420

CCTCAAACCC AAATATAAAA CGCATTCTTT TTGCTTTTTT ACTATTGTAT CGTATTCTAC 3480

GATAACATAC TTTACTTTAT TGTTTTTTTA AATAACAGCA GTTCCCTGTT TATCAACTAT 3540

TCGAACTACT TTCTATTTTG CTTCATACCC TACATAGCGA AAAAATATGA AAAAGCAGAG 3600

AAGAATATCT TAAAAAGACC TCTTCACTGC TAATATTAAC ACTCATTATT TAAACTATAT 3660

GGATTCTATC ATCGAGTATA CTTTTTTACT TATTAGATAC CTTGCTCTTC TTTCACCAAT 3720

TTTTGATCAT ATACACGGAT GAATGGAAGA TAGACTAGGA ATGCTGCAAA TGCACATACT 3780

AGAGCAACTA ATACAGCTCG AAGATCTGCT GTCCCTAAGA AAGCTCCAAT CCCTACTGGA 3840

GTTGGCCATG GAACCTGTGC GATAATTGGC TTAATAAAGT TTAGAGAATT CGCTACGTAA 3900

TAAATAGTAG CAGTAACCAT TGGTGCTAAA ATAAATGGTA TAGCCAAGGC TGGATTATAG 3960

ATAATAGGTA ATCCAAAAAT TAATGGTTCA TTAATATTAA ATAAGGCTGG AACTACAGAT 4020

GCTCGTCCTA TTGCTTTAAG CTGTTCAGAT TTAGAGGCAA AAGCAATATA TAAACATAGT 4080

CCTAAAGTTG CACCAGAACC ACCTGCAATT ACAAACATAT TAGAAAATTC ACCTGCAACA 4140

GCGAAGTGCC CGCCAGCAGC ATTTTCAGCC ATGTTAGCAA GAGCAATTGG ACTAACAAAT 4200

GCAAAAACAA TGTTCGCACC GTGGATACCT ACAATCCAAA GTAGTTGAGT CAATAGATAA 4260

ATAATCATTA AACCAATCCA CGAATTAGTC AGATTGGATA CAAAACCAAA TGGAATTGCA 4320

ATGACTTTAA AAATATCTGT TCCCATTGCT ACAAGAAGAC CGTTGATAAA GATAACAACA 4380

AATGCAACAA CAAATCCCGG AACCAAAGCG GTAAATCCAC GAGAAACTCC TTCTGGAACA 4440

GCTTCAGGCA TTTTAATAAC CCAATTATGT TTAACACACA TACGATAAAT AAGAACAGTC 4500

ACAATTGCCA TAATGATTGC GGTAAAAATC CCTGTTGTCC CAAAACGTGC GACTACATTT 4560

CCCATTGCCC ATCCATCTGC AATTACTGCA CCTTCTTTTA GACTTGTCAC AGTCTTCATC 4620

ATTCCACCAT CAAAAATGAT TTGCGGTACT GTCATGACAA AAGCCATCAA GGCAAGCAAG 4680

GCACCATTAA GAGGATTCAT ATTGAGTTCT TCTTCCTCTG CATAAATTTT TGTCAATTCA 4740

TATGCAAGTG ATAGAACGAA ATAAAGAGAT AGAGAACCCA TAGTCGCATA GTTTGCAACC 4800

ATGTAAAGTG ATGTGAATTT ATCAAATGAA GCAGAGAAAA TATCTGCCAC AATTGGCCAA 4860

AATGAGAAAG CTTGTGGCAA AATACTGAAT ACCAAAAACA TTGATCCTAC AATAGTAAAT 4920

GGTACAGCAG CCATACCTGC AGCCGTGATA GCACGTACTA CTTTAAACTG AGCAAGTTTG 4980

CCCATTGGTC CCATAACATG GTTTTCAAGA AAACCAAACA ACCCGTTTTG TTGATCCATA 5040

AATAGACCTC CTTAATAAAA CATAATAATT TTTACTTTCT AAAGACTAGT TTCAAATACA 5100

AATTATACTA GATCAGGATT ATAAACTAAG TGAGTTCTTT TCCAATTGGA CAAATTGTTG 5160

ATAAGCCTTA TCTGTTCGTT TATAAATTTT TTTAATTCTT CTAATGTCTA ACAAACTCAG 5220

AACTAAACCT AATAGAAGAA CTACAAAAAC AAATAAACGT GCTACTTGGT TATTTTCAAA 5280

AATCGGAAAA AGATTCTTAA ACCAACTTGT CCAAGTTAAA ACAAGTAATC CTATTGAAAT 5340

AAGCATTTGT ATTCTAACAA ACATTAGTGT TATTCCCAAC TTTTCTTTCC TATTTCCATA 5400

AAGTTTAAAT TGTTCAACAG TTGCTAAAAT AGAAAATACT ATGAGCATAA TGGGGAAAAT 5460

AATAATAGGC GAGGGACTAA TAAACTGACT CAAAAGCCAA TAAATATTCC CAAAAAAGAA 5520

GAGTGCTATT GAATAACGTA GAAGAAGATA TCGATTGAAA AAAGTATTAG TTAGAGCCAT 5580

CTCTCGACGT TGTTGTTCAA TCTTTTGTCG TTCTTTTTTA TCCATATCAT TTCCTCCTTA 5640

TATAACAACA CATATTTAGT TAACTTTCTT ATAAAGAGCT AACATTTCCT TTGCTACTTC 5700

TAATAATGTC ATAGTGGTCA TTAAATGATC TTGAGCATGT ACCATGATAA TTTCAATTTT 5760

AATTTCCACT CCACTTGCGT ATTCTTGCAA GAGTTTGGTT TGTGCATGAT GCGCTTCAAG 5820

AATTATCTCA TTTGATTGAT TTAATTTACT TTCTGCATCA TCAAAACTAC CTTCTCTCAT 5880

TTTTGCAAAT GCTTCATGTA TTTCTGACCT TGCATTTCCC GAATGCAGGA TAATTTCAAA 5940

TGCTGCAACC TGCAGTTCCT CTTGATTCAT ATAAACCTCC TATTTTATCT TCTCAAATAT 6000

GTTAATAAAA TCTTCAAAGT TATTGCAAGA TATTAGCTGA TTTTGCAATT CATCATTCTC 6060

TGTCAGAGAG ACTATCTTTT TAGTCACAGT TGCCAAACCT TCGTTCCCAT ATATTGATGG 6120

AGATAGAAGA AATACTAGCT GGACATGTGA ACTTTGATTA TCCCAGAGTA ACGAATCTTT 6180

ACAAATTGCA ACCGAAACCT TTCCCTCTGT ACCAAAGGGC TGAATAGGAT GCGGAACTGC 6240

AATTTTTTCA GAAAAAACAA CTGAACTTAA TTCTTCGCGC TGTTTAATTC CATAAAGTAA 6300

AGATTGTTCA AACTCATTTG ATTCACCAAC AGATAAACTC TCAACCATCT TTTCAAGTAA 6360

ATTTACCTTG TCTGATTCAG TACATATTAA AAAGTTTTCT TTACTAAAAT ACTGTCTAAA 6420

GCCGTTGTTT TCAAATTTGT TAATCTTTGA TGATTGTACA TAACTAGAAA CTTGCATCTA 6480

ATCCATAGCT TTTCTAATCA TTTCCATCTC ATCACTCTTA AGAAACACAC TAACTTTAAA 6540

AACTGGGATT TGAAAATATA GATTTGATAA ATCAATAGCT GACACTATAA AATCTATTCC 6600

TTTAAGTTTT TCTTGATTCA ATTCATAGTA GCCTATTACA TCAACAACTT CTACTCGCTT 6660

CCCAAACTCC GTTTCCAAAC GATTTCTTAA CATTTGGGCT GCACCAAATC CTGTTGCACA 6720

AATAGCAAGA ATATTAAACT TAGTACTCTC TTTGCTACGT TCCATAGCAG CTAAAAAGTG 6780

AAGACTTACA TATGCTACTT CATCATCTGA TATTGTCCAC TCCAAGAACT TGTCCATATT 6840

TGCAAGAATT TCTCTAGTCA TAAAGAATAT ATCACTATAA TTCTGTTTAA TTTCATCTAC 6900

CAAAGGGTTA TTTAAGGTAA TCCGGCTTTC TAAACGTACT TGTAGTGTCA TTAGATGAGT 6960

TATCAATCCT TCAATTAGTT GGAAATCTGA AGAAAAGTTA TACATATCAT CTAATCCTAA 7020

ATTCTGAAAT GTTTTAAATA AAGATTTTTT TAAAACTTCT TCAGAAATAT TCTTCTGATT 7080

TTTTTGACAT TGTTGACTCT TAGCTAACAA ATGCAAAGTA ATGTAGTCTA TTTCCTGAAC 7140

TGGAAATTCC TGATTTGTTA CTTCTCTTAC TTTAGAAAGA ATTCTTTGGG CAACCTTTCT 7200

CTCTATTGCA TCATCAGTCA TCTGACAGTC TATATTTTTT ATTTCAAATC CGGATTTTAA 7260

ACGAATCACA GACAATGCTA TGTGAACTAC TAAATTCTGT AGTACAAAAT CAGATAGTTT 7320

TAGGTTGGCC TCTTGGCATT CATCCAAAAC AATTCTAGCA AATTCTTCTA ATGGAACAGT 7380

TTGATCAAAA AAGTTAAATT TTACATAGCA ATGTATTGTT TTAAAAAATT GATTCTCTAG 7440

GAAATAATTT ATGATAAAAC GTCGTTTATC ACGTTCCTCG CCTGAGACAT AAACTCCTTT 7500

ATTCGCCCTA CTCTCAATGG ACAAATTATA CTCTGATAAC ATCACTCGTA TCTTTCTGAA 7560

ATCATGAGAT AATGTTGAAC GACTAACGTA AAGTTCATCA GCTAAATCAT CAAAAAGAAC 7620

TGGAACTTGC TCAAATAATA ATTTATTTAA GATAAATACT AAACGATCAT CACCTTTTGA 7680

AACCGCAGTT TTCGTATAGT CTTCTTCCAG TTCATAAGTT TGTCTAAACT CCTGGTAAGC 7740

GCCTTGATTC TCAAAAAATA TTTGATACCC TTGACCTTGT TTTGAAATCA ACCGGACTCC 7800

TTGAATAATC ATTGTCTTCT CAATTAATTT CAGTACATTA CGGACAGTTC TATCTGAACA 7860

GGATAAATAT TCTGCCAGTT CTTTGCTTGT AACAAAACGT TCCTTATTTT TTATTAAAAA 7920

TTGAAGGATA TCTTTCTCTT TAATGTTTAA CACATTCATT CCCTCCTAAA ACGTATGTTT 7980

TCATATATTG AAGCATATTA TACACTTAAA TCAGTTTATA TCAAACTCAA AACAATTTAT 8040

CTTAACCTAA ATATTTATTG ACATTTCATG TGTTCATCAA ATATTCTCAA GAATCAAATT 8100

AGCCATTTTT TCAATTCCCA TTGGAATAGG AATATAGGCT TGAGGAGGTA TTTGTACAAC 8160

TGGTTTTCCT GCTTTAGAAC CAGCCTCTTC AAATTGCTTA AAGTACATTT TTGTTTGAGG 8220

ACTGACAAGA TACAAATCAA AAGCTGCTGC TGCGATAGCT TTCCCTCCTT CAGTAGCACT 8280

AATAGCATCA ACTACAATAT CTTTCCCTTT TCCTTTTAGA AACTCTGTTG TTTTCTGTGC 8340

CATAAGTGAT GAAGACATTC CTGCTGCACA AATAATTAAA GCTTTTGCCA TAATATTTTC 8400

TCCTTTTCTT AAATCCAATC AAAGCTGTGC TAAGTTGGCT TATTTGTTAT CTATTTTTAT 8460

TATAAAATAA AGCGTTTCCA ATGACAATTC CCTCATTTTC CTAAATGATA TGGAAAAAAA 8520

TTATTTATAC TTCAATTTAT AAAATAAAAT TATTCCTGAG AGTAGAAATG AAACACTATT 8580

TGCTAAAATC AAAGGCAAGT CTCCTATACG AATACCATGA GCAAGCCACA ATGCAATACC 8640

AATAACTTGC ATAACATACA TACCTAGAGC AATAGATCCT GTGTCCTTTG TCTTAACTAC 8700

ACGAAAAACT TGTGGTAAAA ATGCAAATGT TGTTAAAATT GCTGCAATAC TTCCAATCAT 8760

ATGTCACCTC AATATGCTAA ACAAACTGAG AATAATCTCA GTTTGTTTAT ACTATTCTAC 8820

TGATTCACCG TTAGATGAAA TAACTTCCTT ATACCAGCCA AAAGATTTTT TCGGGGAACG 8880

ATTATAACTT CCCTTCCCAT TATCATCTTT ATCTACATAA ATAAAGCCAT AACGTTTCCG 8940

CATTTCACCG GTACCAGCTG AAACCAAATC AATACATCCC CATGGAGTAT AACCCATTAA 9000

ATCAACACCA TCTTCAACTA CAGCCTTTTT CATTTCACGA ATATGGGCAC CTAGATATTC 9060

AATTCTATAA TCATCATGTA CCATACCATC TGCTGCAACT TGATCTATAG CTCCAAAACC 9120

ATTTTCAACA ATAAAGAGTG GTAAGTGATA GTGGTCTGTA AACCAATTTA ACGCATAACG 9180

CAAACCTTCT GGATCAATTT GCCACTCCCA TTCAGAAGCC TTAACATAAT TATTTTTCAC 9240

TAAATCTTCT GTTTCAAGAT AATCAAAATA AGGATTATTT TCACGATGAG AGTCGATAGC 9300

AAAGGACATA TAGTAACTGA AACCAATGTA ATCTACAGTC CCACCAAGTA AATCTTCTTT 9360

ATCCTGGGCA GTAAAATCAA CTGAAATACC TTTTCGTTCC CAATACTTGA AAATATGCTC 9420

AGGATATTTA CCTAAAACAT GCACATCAGC AAAATAATAA CGCTTCTGCA TAGCTTTCAT 9480

TGCCATTAAG ATATCCTTAG GATTGCAAGT AACTGGATAA ATTGGACACA TCGCAATCAT 9540

ACAACCTATT TGAAAATCTG GATTAATCTC ATGACCAATT TTTACAGCTC GTGCAGAAGC 9600

AACTAATTCG TAATGTGCTG CTTGATACAT AATTGCTTCT CTATTATCAC CTTCCTCATA 9660

TACAATACCT GAGTTAGTAA ATGGTGCAAA ATCTTCCTGA TAATTCGCTT GATTATTGAT 9720

TTCATTGAAA GTCATCCAAT ATTTAACCTT ATCTTTGTAA CGTTTAAATA CGACTTCTGC 9780

AAAACGAGCA AAGAAATCAA TCAATTTCCT ATTTTTCCAA CCACCATATT CGGTCACTAA 9840

GTGATAAGGC ATTTCAAAAT GAGATAGAGT GATGACAGGT TCAATACCAT TCTTTAAGCA 9900

TTCATCAAAA AGATTATCAT AAAACTGTAA TCCTTCTTCA TTCGGCTCTA ACTCATCACC 9960

TTTTGGAAAG ATACGTGTCC ATGCAATAGA GGTACGGAAG CACTTGAATC CCATTTCAGC 10020

AAAAAGTGCT ATATCTTCTT TATAACGGTG ATAAAAATCT ATCGCCTCAT GATTTGGATA 10080

ATATTTACCC TCTAAAACTC CCAAAGTAAT TTCACGAGCT ACTCCATGAC GACCAGCAGT 10140

CATAACATCA GCAACACTAA TTCCCTTGCC ACCTTCTTGC CATCCACCTT CAAGTTGATG 10200

AGCAGCAACA GCACCACCCC ATAAAAATCC ATCTTTAAAA GTAGTCATCT TTTTTCCTCC 10260

TGACTTTGAT ACTCTTATTA TAAACCTTAA ACCAAAAGAT GAAAACGCAT TCTTTTTCCT 10320

TATTGTTAAG GAAAGAAGTA ATTTTTAATG GAAATAGAAC AATATCTTCT TGTATTCTCG 10380

TAATGATATC TTTACGATTT TCAATACTTT CAAACTACAA AAACTCTCAC AATAATTCTA 10440

ATTCCCTGTG TCTATAAACG ACTTATCGCT TTCTGGCATC CCAGAATCAT CTTCTATATA 10500

ACGTTCAACT TGCATCTGCA AGTGATATTT TTTTCTTAAA TCTAAGATTT TCTGCATTGT 10560

CTTTGATTGA TAATGTTTAT CTAAAGTTTC TTGATTTATC CACTGATCAA TAAGGAGAAT 10620

AGTTCCCTCT TTTTCAATTG GTAAAAAATA TTCGTATTTC AAGTTACCTT TTTGATTTCT 10680

AATTTCTTTA ACAAGGCCAC TATCAAGCAT TTCTCTTGCA AACTTTATTG CACTATCTCC 10740

ATCACCTTTA TAATATACAT GAATAGTCAA TGTCATCTTA TATCCTCCAA AATCATCCTT 10800

CAATTTTAAA AAAACAAGTT TAGATGAGGA TCTAAACTTG TTTTTTATGA ACTAATTATC 10860

TAACGTTTCG CCATTACTTT CAATCACTTC TTTATACCAA TAAAATGATT TTTTCTTATA 10920

GCGATTTATA GTCAATTGAA ACAAGAGCAG GACAAAAGAG CCTCATAAAA GGTATTGCAA 10980

CTTGGTAATA CCTTTTTGAG GTGCTTTTTG ATATGAGCCC ATGTTTTCTC AATAGGATTG 11040

TACTCAGGTG AGTAGGGAGG AAGAGGTAAA AGTTTATACC CAAACTCTTC ACACAAGAGT 11100

TCTAGCTTCC CCATTCTATG GAATCTTGCA TTATCCATAA TAATAACCGA TGGTGTGGTT 11160

AATGTTGGTA AGAGAAACTT CTGAAACCAA GCTTCAAAAA AGTCGCTCGT CATCGTCTCT 11220

TCGTAAGTCA TTGGAGCGAT TAACTCACCA TTTGTTAGAC CTGCAACCAA AGAAATCCTC 11280

TGATATCTTC TTCCAGATAC TTT 11303

(2) INFORMATION FOR SEQ ID NO: 116:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 3112 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 116:

CCTTAGATTT CCACTTGCCA GAGGAATTGA TTGCCCAAAC GCCCCTTGAA AAACGTGATG 60

CCTCCAAACT CCTCATCGTC AACCGTGAGA CAGGAGAAAT GCAAGATAAA CATTTCCACT 120

CTATTATTGA TATGCTGGAA CCTGGTGATG CCCTTGTCAT GAACGACACC CGAGTTCTCC 180

CTGCCCGCCT CTATGGTCAA AAAGTGGAGA CAGGAGGTCA TGTGGAACTT CTCCTCCTTA 240

AGAACACTAG TGGAGACGAG TGGGAAGTTC TGGCTAAACC TGCCAAACGC CTCAAGGTCG 300

GTACTCGTAT CAGCTTTGGT GATGGCCGCC TCAGCGCTGT CGTTACAGAA GAATTGACCC 360

ACGGGGGACG CATTGTCCGC TTTGAATACC AAGGAATTTT CCTAGAAGTC TTGGAAAGTC 420

TGGGAGAAAT GCCTCTGCCA CCTTATATCC ACGAAAAATT AGATGACCGT GAACGTTATC 480

AAACCGTCTA CGCCAAGGAA AGTGGCTCTG CTGCAGCACC GACTGCTGGT CTTCACTTCA 540

CCAAAGAACT GCTGGCAGAA ATCCAAGCTA AGGGTGTTCA TCTAGTCTAT CTGACTCTCC 600

ATGTCGGACT CGGAACCTTT AGACCTGTTT CTGTGGATAA TCTGGACGAA CACGAAATGC 660

ACTCAGAGTT CTATCAACTT TCTGAGGAAG CTGCTGCCAC CCTTCGCTCT GTCAAAAAAA 720

ATGGTGGTCG TGTCATCGCT GTCGGAACCA CTTCTATCCG CACCTTGGAA ACTATTGGTT 780

CCAAGTTTGA TGGGCAAATC CAAGCAGATT CTGGTTGGAC CAATATCTTT ATCAAACCTG 840

GGTATGAGTG GAAGGTCGTG GATGCCTTCT CAACCAACTT CCACCTGCCA AAATCAACTC 900

TGGTCATGTT GGTTTCTGCC TTTGCAGGCC GTGAATTAGT CTTAGATGCC TACCACCATT 960

CCATCCAAGA ACACTACCGC TTCTTCAGTT TTGGTGACGC CATGTTTATT TATTGAGAAA 1020

GAATTTCTCT AAATCTTCTA ATACCAATAA ATCGCTAAGA TATTATTTCA AAGAACATCT 1080

ACAATTGAAA CTCTAGCTAG CTGTAGAAGA GGCCTAGTAC ATTGAAATTA AAATGCTTCC 1140

CCCTAGCTTC GAAAATATTG CCATAGATTG CGTTGACTCT CCAAATTGAT TCATCTATAT 1200

TTTATTTCAG CTTCCTATAC TTTCTTCGCT GTTTGTAAAT CAAAATGCAA GACACATGAG 1260

TAGCACCATA TTTGTTACTC TTATCTGTCC TCTCAAGAGA CTATTATGAG TTATTTCAGA 1320

ATCATTCACT ACTTTGACCC TGACTCTCCT TAGTCTCAAA ATCAAAGACT TATACTCTTC 1380

AAAAATCTCT TCAAACCGCG TCAACGTCAC CTTGGATTAT ATATGTGatC TGaCTTCGTC 1440

AGTTCTATCT ACAACCTCAA AGCAGTACTT TGAGCAACCT GCGACTAGTT TTCTAGTTTG 1500

CTCTTTGATT TTCATTGAGT ATTAAACAAA AAGTGAACAA ATCTGAATTC TAATGTACAG 1560

AAGACTAGGC TTGTTCACTT TTTTATAGTC GCTATAAGAT GACCTTATCT ATAGCTTTTT 1620

ATATATAATT ATATATTCAG ACATACTATT ATCAATTTTG TCGCAGGGAG GAATCTGTTA 1680

ACGCACCCAT TCACCATTAT CATTGACTCT ATAGCCATCT ATACTTGTAT TGACCGCTAA 1740

CTCACCCGAT GTATTTACAT AATACCATTT ACCACCAACT TGGAACCATT GATTGACTTT 1800

CATAGAACCG TTGCTGTTGA GGTAGTACCA TGAACTATTA ACTTGTACCC AACCTGTTGC 1860

CATGGAACCA TCAGTATTAT AAAAATACCA CATACCATTT TCTTGTTTCC AGTCTGTTGT 1920

TGGAGCAACT GCTTTAGCTG GTTCTACTGC TACATCTGTT CCTTGGTTAG ATGTAACAGA 1980

TACAGGATAC GAAGGAATAG ATGATTGCTC AGGAACAACA ACTTTTTCAG GTTCTCTCGT 2040

CCCTCTCCTT ATACGTCTTT TTACCATCTC TTTAGTAATT TGACGAGAAG TAGTTTCTTC 2100

AATTGTTCCA TCACGTTCAT CTACAGTATA GATTGTAGTA AGAGTAATTT ACCAATTTCT 2160

CCTACTTCTT CTACTTCTTG ACTTTTATCA AGAGTTGGGC CATCGAGATA TTCTGTTTCG 2220

ATTGGAATTT CTTGGACAAG AACTTGGGGC TTGGTTCTTT TTTTAACAAC TCTTGTTTGA 2280

GAGTCTTTTT TTTGACTTAA AGTACTCTCA GTTACTTGTC CACTCTTTCC ATCTACATTA 2340

TAAGTTATCG TTGTAACTGT TTTCCCATTC TTTCCTAGAG TAATCTCTTG CTCCTGTCCT 2400

GCAGAAAGGT CATTGTCTGC TTCATATTTA GTAGCAAATG GAACAAGAAC TTCTTCAACC 2460

TTGCTTTTAG CTGGAACTTT GATAACTGTA TCCGTGGCTT CTTTTCTATC AACAGTAACC 2520

TGTTCGGTAA CATAACCAGT CTCTGGATTA ACATCGTAGG TCCTTGTCGT AGTTACATAG 2580

CCATCCTCTC CATCAATTGT AACAGGATTT TCACTACGGT CTTTTGTTTC ATCTTTTTCA 2640

TAACGAATTC GCGTACTTGA AATTTTCTTG GTTACTACCT TAGGTTTAGT CGCTACTTTT 2700

ACAATAATAT CCCCATTGTC AGCGTCATCA TACTCTATTC CCTCTTCTTT ATCTCTAGTA 2760

TCATCTCTGA CATATTGAAT CCCATCAGCA GCATGAACAA AACTTGTATT CAGATTCCTC 2820

CTAAAAATAA AGTTAGCCCG ATTACCGCAG AACCAAAAAT CTTTCCGAGT TTACGTATTG 2880

CATAGCGCTT ATTAGTATTA GATTTTGCCA TTACATCCTA CTTCTAGTAT AGCATCTTTT 2940

840

CTATCAAACG TTAAACAATA TACGTTATAT ATAAAATAGA CTTAGAATGA TATATTGATT 3000

ATTGAACTAA CACTTTAACT ATATCGTAAT CAATCTCATA TATAAAGGAT TGCAGACATC 3060

TTATCTAAAT ACATGCGAAT ATATTTAGAT ACAAACATTC CAACTTGATA AT 3112

(2) INFORMATION FOR SEQ ID NO: 117:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 4327 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 117:

CCCAAAAATC TCTTCAAACC ACGTCAGCTT CGCCTTGCCG TAGTATGGTT ACTGACTTCG 60

TCAGTTCTAT CCACAACCTC AAAACAGTGT TTTGAGCATC ATGCgGCTAG CTTCTTAGTT 120

TGCTCTTTGA TTTTCATTGA GTATAAAAAC AGATGAGTTT CTGTTTTCTT TTTATGGACT 180

ATAAATGTTC AGCTGAAACT ACTTTCAAGG ACATTATTAT ATAAAAGAAT TTTTTGAAAC 240

TAAAATCTAC TATATTACAC TATATTGAAA GCGTTTTAAA AATGAGGTAT AATAAATTTA 300

CTAACGCTTA TAAAAAGTGA TAGAATCTAT TTTTATGTAT ATTTAAAGAT AGATTGCTGT 360

AAAAATAGTA GTAGCTATGC GAAATAACAG ATAGAGAGAA GGGATTGAAG CTTAGAAAAG 420

GGGAATAATA TGATATTTAA GGCATTCAAG ACAAAAAAGC AGAGAAAAAG ACAAGTTGAA 480

CTACTTTTGA CAGTTTTTTT CGACAGTTTT CTGATTGATT TATTTCTTCA CTTATTTGGG 540

ATTGTCCCCT TTAAGCTGGA TAAGATTCTG ATTGTGAGCT TGATTATATT TCCCATTATT 600

TCTACAAGTA TTTATGCTTA TGAAAAGCTA TTTGAAAAAG TGTTCGATAA GGATTGAGCA 660

GGAAGTATGG TGTAAATAGC ATAGGCTGAT GTCCATCATT TGCTTATAAA GAGATATTTT 720

AGTTTAATTG CAGCGGTGTC CTGGTAGATA AACTAGATTG GCAGGAGTCT GATTGGAGAA 780

AGGAGAGGGG AAAATTGGCA CCAATTTGAG ATAGTTTGTT TAGTTCATTT TTGTCATTTA 840

AATGAACTGT AGTAAAAGAA AGTTAATAAA AGACAAACTA AGTGCATTTT CTGGAGTAAA 900

TGTCTTATTT CAGAAATCGG GATATAGATA TAGAGAGGAT CAGTATGAAT CGGAGTGTTC 960

AAGAACGTAA GTGTCGTTAT AGCATTAGGA AACTATCGGT AGGAGCGGTT TCTATGATTG 1020

TAGGAGCAGT GGTATTTGGA ACGTCTCCTG TTTTAGCTCA AGAAGGGGCA AGTGAGCAAC 1080

CTCTGGCAAA TGAAACTCAA CTTTCGGGGG AGAGCTCAAC CCTAACTGAT ACAGAAAAGA 1140

GCCAGCCTTC TTCAGAGACT GAACTTTCTG GCAATAAGCA AGAACAAGAA AGGAAAGATA 1200

AGCAAGAAGA AAAAATTCCA AGAGATTACT ATGCACGAGA TTTGGAAAAT GTCGAAACAG 1260

TGATAGAAAA AGAAGATGTT GAAACCAATG CTTCAAATGG TCAGAGAGTT GATTTATCAA 1320

GTGAACTAGA TAAACTAAAG AAACTTGAAA ACGCAACAGT TCACATGGAG TTTAAGCCAG 1380

ATGCCAAGGC CCCAGCATTC TATAATCTCT TTTCTGTGTC AAGTGCTACT AAAAAAGATG 1440

AGTACTTCAC TATGGCAGTT TACAATAATA CTGCTACTCT AGAGGGGCGT GGTTCGGATG 1500

GGAAACAGTT TTACAATAAT TACAACGATG CACCCTTAAA AGTTAAACCA GGTCAGTGGA 1560

ATTCTGTGAC TTTCACAGTT GAAAAACCGA CAGCAGAACT ACCTAAAGGC CGAGTGCGCC 1620

TCTACGTAAA CGGGGTATTA TCTCGAACAA GTCTGAGATC TGGCAATTTC ATTAAAGATA 1680

TGCCAGATGT AACGCATGTG CAAATCGGAG CAACCAAGCG TGCCAACAAT ACGGTTTGGG 1740

GGTCAAATCT ACAGATTCGG AATCTCACTG TGTATAATCG TGCTTTAACA CCAGAAGAGG 1800

TACAAAAACG TAGTCAACTT TTTAAACGCT CAGATTTAGA AAAAAAACTA CCTGAAGGAG 1860

CGGCTTTAAC AGAGAAAACG GACATATTCG AAAGCGGGCG TAACGGTAAC CCAAATAAAG 1920

ATGGAATCAA GAGTTATCGT ATTCCAGCAC TTCTCAAGAC AGATAAAGGA ACTTTGATCG 1980

CAGGTGCAGA TGAACGCCGT CTCCATTCGA GTGACTGGGG TGATATCGGT ATGGTCATCA 2040

GACGTAGTGA AGATAATGGT AAAACTTGGG GTGACCGAGT AACCATTACC AACTTACGTG 2100

ACAATCCAAA AGCTTCTGAC CCATCGATCG GTTCACCAGT GAATATCGAT ATGGTGTTGG 2160

TTCAAGATCC TGAAACCAAA CGAATCTTTT CTATCTATGA CATGTTCCCA GAAGGGAAGG 2220

GAATCTTTGG AATGTCTTCA CAAAAAGAAG AAGCCTACAA AAAAATCGAT GGAAAAACCT 2280

ATCAAATCCT CTACCGTGAA GGAGAAAAGG GAGCTTATAC CATTCGAGAA AATGGTACTG 2340

TCTATACACC AGATGGTAAG GCGACAGACT ATCGCGTTGT TGTAGATCCT GTTAAACCAG 2400

CCTATAGCGA CAAGGGTGAT CTATACAAGG GTGACCAATT ACTAGGAAAT ATCTACTTCA 2460

CAACAAACAA AACTTCTCCA TTTAGAATTG CCAAGGATAG CTATCTATGG ATGTCCTACA 2520

GTGATGACGA CGGGAAGACA TGGTCAGCTC CTCAAGATAT TACTCCGATG GTCAAAGCCG 2580

ATTGGATGAA ATTCTTGGGT GTAGGTCCTG GAACAGGAAT TGTACTTCGG AATGGGCCTC 2640

ACAAGGGACG GATTTTGATA CCGGTTTATA CGACTAATAA TGTATCTCAC TTAGATGGCT 2700

CGCAATCTTC TCGTGTCATC TATTCAGATG ATCATGGAAA AACTTGGCAT GCTGGAGAAG 2760

CGGTCAACGA TAACCGTCAG GTAGACGGTC AAAAGATCCA CTCTTCTACG ATGAACAATA 2820

GACGTGCGCA AAATACAGAA TCAACGGTGG TACAACTAAA CAATGGAGAT GTTAAACTCT 2880

TTATGCGTGG TTTGACTGGA GATCTTCAGG TTGCTACAAG TAAAGACGGA GGAGTGACTT 2940

GGGAGAAGGA TATCAAACGT TATCCACAGG TTAAAGATGT CTATGTTCAA ATGTCTGCTA 3000

TCCATACGAT GCACGAAGGA AAAGAATACA TCATCCTCAG TAATGCAGGT GGACCGAAAC 3060

GTGAAAATGG GATGGTCCAC TTGGCACGTG TCGAAGAAAA TGGTGAGTTG ACTTGGCTCA 3120

AACACAATCC AATTCAAAAA GGAGAGTTTG CCTATAATTC GCTCCAAGAA TTAGGAAATG 3180

GGGAGTATGG CATCTTGTAT GAACATACTG AAAAAGGACA AAATGCCTAT ACCCTATCAT 3240

TTAGAAAATT TAATTGGGAA TTTTTGAGCA AAAATCTGAT TTCTCCTACC GAAGCGAACT 3300

AGAGAGATGG GCAAAGGAGA GATGGGCAAA GGAGTTATTG GCTTGGAGTT CGACTCAGAA 3360

GTATTGGTCA ACAAGGCTCC AACCCTTCAA TTGGCAAATG GTAAAACAGC GACTTTCCTA 3420

ACCCAGTATG ATAGCAAGAC CTTGTTGTTT GCAGTAGATA AGGAAGATAT CGGACAGGAA 3480

ATTATTGGTA TAGCTAAAGG AAGCATCGAA AGTATGCATA ATCTTCCTGT AAATCTAGCA 3540

GGTGCCAGAG TTCCTGGCGG AGTAAATGGT AGCAAAGCAG CGGTGCATGA AGTTCCAGAA 3600

TTTACAGGGG GAGTTAATGG TACAGAGCCA GCTGTTCATG AAATCGCAGA GTATAAGGGA 3660

TCTGATTCGC TTGTAACTCT TACTACAAAA AAAGATTATA CTTACAAAGC TCCTCTTGCT 3720

CAGCAGGCAC TTCCTGAAAC AGGAAACAAG GAGAGTGACC TCCTAGCTTC ACTAGGACTA 3780

ACAGCTTTCT TCCTTGGTCT GTTTACGCTA GGGAAAAAGA GAGAACAATA AGAGAAGAAT 3840

TCTAAACATT TGATTTTGTA AAAATGGCTC TTTGTCAACT GTAGTGGGTT GAAGTCAGCT 3900

AAGCTCGAGA AAGGACAAAT TTTGTCCTTT CTTTTTTGAT ATTCAGAGCG ATAAAAATCC 3960

GTTTTTTGAA GTTTTCAAAG TTCCGAAAAC CAAAGGCATT GCGCTTGATA AGTTTGATGA 4020

GATTATTGGT CGCTTCCAAT TTGGCGTTAG AATAGTGTAG TTGAAGGGCG TTGACGATTT 4080

TCTCTTTGTC CTTTAGAAAG GTTTTAAAGA CAGTCTGAAA AAGAGGATGA ACCTGCTTTA 4140

GATTGTCCTC AATGAGTCCG AAAAATTTCT CCGGTTCCTT ATTCTGAAAG TGAAACAGCA 4200

AGAGTTGATA GAGCTGATAG TGATGTTTCA AGTCTTGTGA ATAGCTCAAA AGCTTGTTTA 4260

AAATCTCTTT ATTGGTTAAA TGCATACGAA AAGTAGGGCG ATAAAAATGT TTATCGCTGA 4320

GTTTACG 4327

(2) INFORMATION FOR SEQ ID NO: 118:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 3521 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 118:

CTCTGGCCCT GCCACTCCAA CGTTTTGTCA GGGTGCTTTT TTCATAAAGG AGTTCTTATG 60

TTAGATATCA AACGTATTCG TACAGATTTT GAAGCTGTCG CAGAAAAATT AGCTACACGT 120

GGTGTAGATG CTGCTGTCTT GAATGAAATG AAAGAAATCG ATGCTAAACG TCGTAACATC 180

TTGGTCAAGG TTGAAACTCT CAAAGCAGAA CGTAACACAG TTTCTGCTGA GATTGCCCAA 240

GCTAAGCGCA ACAAGGAAAA TACAGATGAC AAGATTGCTG CCATGCAAAA TCTATCTGCT 300

GAGGTTAAAG CCTTGGATGC TGAATTGGCA GAAATCGATG CTAAATTGAC AGAATTTACA 360

ACGACTCTTC CAAATATCCC AGCTGACAGC GTTCCTGTTG GGGCTGACGA AGACGACAAT 420

GTGGAAGTTC GCCGTTGGGG TACTCCACGC GAGTTTGACT TCGAACCTAA AGCTCACTGG 480

GATCTCGGTG AAGACCTTGG TATCCTTGAC TGGGAACGCG GTGGTAAGGT AACAGGCGCT 540

CGCTTCCTCT TCTATAAAGG CCTCGGTGCT CGTTTGGAAC GTGCTATCTA CAACTTTATG 600

TTGGATGAAC ATGGAAAAGA AGGCTATACT GAAGTCATCA CACCTTACAT AGTCAACCAT 660

GATTCTATGT TTGGTACTGG TCAGTATCCA AAATTTAAGG AAGATACTTT TGAACTCAGC 720

GATACCAACT TTGTCTTGAT TCCAACTGCT GAAGTTCCTC TGACAAACTA CTACCGTGAT 780

GAAATCTTAG ACGGCAAAGA TCTTCCAATC TACTTCACTG CCATGAGTCC GTCATTCCGT 840

TCTGAGGCTG GTTCTGCCGG TCGTGATACG CGTGGCTTGA TCCGTTTGCA CCAATTCCAC 900

AAGGTTGAAA TGGTCAAATT TGCCAAACCA GAAGAATCTT ACGAAGAATT GGAAAAAATG 960

ACAGCCAACG CTGAAAACAT TCTTCAAAAA CTCAACCTTC CATACCGTGT CGTTGCTCTC 1020

TCTACTGGAG ATATGGGCTT CTCAGCTGCG AAGACTTACG ACTTGGAAGT GTGGATTCCA 1080

GCACAAAACA ATTACCGTGA AATCTCAAGC TGTTCAAACA CAGAAGATTT CCAAGCCCGT 1140

CGTGCCCAAA TCCGTTACCG TGATGAAGCA GATGGCAAGG TGAAACTCCT TCATACCTTG 1200

AACGGTTCTG GACTTGCAGT TGGACGTACA GTGGCTGCAA TTCTTGAAAA TTACCAAAAT 1260

GAAGATGGTT CTGTGACCAT CCCAGAAGCA CTTCGTCCAT ACATGGGTGG AGCTGAAGTC 1320

ATCAAACCAT AAAAAATAAG GTTTAGCTAT TTCTAGCTAG ACCTTTTTTC GTAACCAAAT 1380

CAGATAAGCA CCTAGTACAA AGAATAAAAT AGTTAGGCAT ATAATGGTTT CAGCCAATAC 1440

CAGGTAATCC AGAAATGGAA GTTTCAAAAT TCCCTGAGCC ATCTTGAGCG AGGTCGCTGT 1500

GATAATGGTT GGGAAGGTGA GGGCTGAGAA GGCTGGTTGA AAACCTTGTT TTAAAATGTT 1560

GGGCAGACGA GTTAAAACAA AGAAAAAGAA GGATTGAGAA GCCAAAATCA TGACAATCAA 1620

GACCCAAGTC GGCAGGCTGG TTCCTCCTAC TCGAACTAGA GAAGCCAAGA GTAGAGAGAA 1680

AGGAGCACAG TAGATTCCTT CTTGTCCAAG CAAGGCTAGT GGGAGTGGAT GTTTCTTTAA 1740

ATCGCTATAA ATAAGGGGAT AGAGATAGAA GGTCAAGAGA AAACCAAAAC TCAAGGTCGC 1800

ATAGGCAATT TCGATAATAC CTACCAGAGG ATAGGTCAAG GCAGCCACTG CTATCCCCAC 1860

ATAGAGAACC GTCCAGCTTG GAGTGGCATG AACCCTCCGC CCTGGACAAG CAAACTTGAT 1920

GGTAAAACCA GCAATCAAGG TCAAATCCAA GAGAAATGAA AACCACCAAA TCCCTTGTGC 1980

TACCAAAGGA AGATAAGAGA ATACGCGAAA GACATAGGTC GATAAAATCA TCCCAGCCAT 2040

AGGAAAGGTT GCCATTCCTG ACAAAAGAGG GGGCTTGGTC AATTCTTGCT TGGTTTCTTT 2100

CCAATTAAAG AGATGCAGAA TTAGAAAGTA AATCCATAAA ACCAAACCAA TCAGACTAAA 2160

AAGATGGGAT AGAACCGGCA ACGTATCTAA AATAAGATTT CCAGCTCCTG CCAAACCTAG 2220

CAAACAACCT GAAAATACTA AGGGGAGTTT TTTCATCCTA ACCTCCAATA ATCATGTTAG 2280

TTTCAGTATA ACATAAAAGC GCTTAAATGA GGATTTAAAA AAACGAGTCC GCTTATTTCA 2340

GACTTCATTT TACTCAGATA TGAATTAGGC ATAAGGTTGC AATTCTGGAT TAATTGGTGT 2400

ATTAGCTAAG TTGTTGGCAT AGTTACAGAG GATTGCTAGG CTGACACCAA AAACCACATC 2460

CAAGGCATTT TGTTGAGTGT AGCCAGCTTC TAAAAACTCA GACAAGGCTT CATCTCCTAC 2520

ACGACCCTTG GTATTGATAA CTGCCAAGGT AAACTTAGCT AGGGTATCCA ATTTAGGATC 2580

TGTTTCAATT GGAGTACGAT TGCGAAGAGC TTGAATCAAG TCATCATTCA TCTGGATTTG 2640

TTTGATGGAA AAGGCTGTGT GACCTGCGAC ACAGAAGGCA CAACCATTGG TCACGGCTGC 2700

CGTGATTTGC ACCACTTCAC GCTCAACGGG TGTCAGGCTG TTGCGACGGT GGATAGATGA 2760

GACAATTTGG TAGGCTTCTA AAACAGTCGG GGCATTGGCC AAGAGACCGA TTAGGTTGGG 2820

AATATAGCCA TTGTTGTCTT TTTCTACTGT TTCAAGAATT TCTTTCACTT CTGCTGGTGC 2880

TGACTCTACT GTATGGATAG TAAATGTTGT CATAAGATAC CTCTTTTCTT ATTATTGACA 2940

CTAATATTAT TGGAAAATCT TATAAAATCC TGATTCCTAA GTTTATCTAA GATAAAGCTT 3000

TATTCTCTCA TAAGATTTTC GTTGTTATAT TAGTTTATCA CACTTCCAAT CACTTGTATA 3060

ATATATATTA TATATCAGGC TGATAAAAAT TATTTATAGG CAAAAAAATC ACACGAGCTG 3120

TGTGATTCCA TTATTTGTCA AAATACTTTT TAGTTTCAGC AATAACGACT GGCGACAAGA 3180

CCAAGAGGGC AATCAAGTTT GGCAGAGCCA TCAAGGCGTT AACGATATCT GCGATAATCC 3240

AGACCATATC CAACTCGATA AATCCTCCTA ACAAGACCAT GAGCACAAAA ACCACACGGT 3300

AGAGCCAGAT AAAGCGAACC CCAAAGAGGA ACTCAAAACA GCGTTCTCCG TAATAGTTCC 3360

AACCTAGAAT CGTTGTAAAG GCAAAAAGTA CAAGGAAGAT GGTCAAGAGA GCAGGCCCAA 3420

AGTGTGAAAA GTTTGTTGAG AAAGCTGACT GAGTCAAGGC AACCCCATTC AAGTCACCGC 3480

TCCAAACTCC AGTTACCAAG ATGGTCAAAC CAGTTAGAGT A 3521

(2) INFORMATION FOR SEQ ID NO: 119:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 1968 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 119:

AACCTGGGCA AGCAAGCTAA AAGCAATGGG ACCTGGAATC CTAATGGCAA CTGCCGCTGT 60

TGGAGGTTCC CACATTGTAT CCTCAACTCA AGCTGGCGGT TCTTACGGTT GGTCTCTACT 120

TCTCTTGGTC ATCTTAGCCA ATGTCTTTAA ATATCCATTT TTCCGTTTTG GTGCTGAATA 180

CACAGCTGAT ACTGGAAAGA CTTTGGTTGA AGGTTATGCC GAAAAAGGAA AACTCTATCT 240

CTGGATTTTC TTTATCCTCA ATGTCTTTTC GGCTATGGTC AACACGGCTG GTGTTGCCAT 300

TCTGTGCTCA GCTATCATCG CCAGTGCCTT CCCAATGATT GGACTTAGCA TTACTCAGTG 360

GTCCCTCATT CTCGTTGCAA TCATTTGGGC TATGCTACTC TTTGGAGGCT ACAAACTTTT 420

AGACGGCATG GTCAAATGGA TTATGTCTGC CTTAACCATT GCGACTGTTC TTGCAGTTAT 480

CATTGCGGCG GTCAAGCATC CAGAATACAG TTCTGATTTT GTCGAGAAGA CACCTTGGCA 540

AATGGCAGCT CTGCCCTTCA TCGTCTCCCT CCTAGGATGG ATGCCGGCTC CTATTGAAAT 600

TTCAGCCATC AATTCACTTT GGTCAGCTGA AAAGAGAAAG ACCGTCAACT TTAACACAGA 660

AGACGCTCTG TTTGACTTTA ACACTGGTTA TATTGGAACA GCTATCCTAG CCGTCTTCTT 720

TGTGGCACTG GGAGCACTGA TTCAGTATCC TACAGGGCAG GCGGTTGAAG CTGCTTCAGC 780

CAAATACATC TCTCAATTCG TGGGCATGTA TGCCTCTGTT CTTGGCGAAT GGTCCCGTTA 840

CTTGATTACC TTTATTGCCT TCCTCTGTAT CTTTGGAACA GTTATAACTG TTATCGATGG 900

CTATTCTCGC GTTAATCAGG AATCTCTCCG ACTGCTAATC AGTCAAAAAG AGGACAATCG 960

TAAATCTTTG AACATCTGGA TGACCATCAC TGCTATCATC GGTATCGTCA TTATCAAGTT 1020

CTTCGCTGGT CAGGTTTCAA CCATGCTCCG CTTTGCCATG ATTGGCTCTT TCCTGACAAC 1080

ACCTTTCTTT GCTCTTTTGA ATTACGCCTT GGTAACGCGT GAAAACAAAA ATCTTCCTTC 1140

TTGGCTCAAA CACCTTGCCA TTGCGGGATT GATTTTCCTC TTTGCTTCGC CATCTTCTTT 1200

ATCTACGCAC TCGCAATCGG AAAAGCAGGG TAAGGGACAA GCGCGAGATG AAGATAAGGT 1260

TTCATTTCAA GAGAAAATTC AGCAAATATT TCTATGATAA AAAGCATAAG AACAAGGTTT 1320

TGAAGACCTG AACTTATGCT TTTTTACGTT CTTAAAGACT GTTTATACTC AAAAAACAGT 1380

TGAACAACTT CAACCACCTC TTATAAGAAC TTTATACTAT TCGAGAATCT CTTCAAACCA 1440

CGTCAGCTCT ATCTGCAACC TCAAAGCTGT GCTTTGAGCA ACCTGCGACT AGCTTCCTAG 1500

TTTGCTCTTT GATTTTCATT GAGTATTAAT TCTCCTTTTC CAACTCATAC AAATCTGCGA 1560

TAATAGCTGC GACATGTTTG ATATCTTCCA GCATGCCTCG CATTTCAAAG TCAGCCAATA 1620

CAGGGAAGCC AAAGCGTTGA CTGTATTGCT TGGCTGTTAG GCAGTATTGG TTATTAAAGT 1680

TACGATTTCC TGACCCAACC ACACCAAAAC ACTTACTAGC ATTGTTACCA TAGGCAATAA 1740

AATCTCCCAC CGGTGTCGTC AAAATCTCAA CATCTCCGTT ATCCACGCCA TTCCCACCTT 1800

CGAGATAGGT CGGCAAAAAA GCGACATAGG GATGGTCCAT TTCATAGAAA TTTTTGCCTT 1860

CCTTGACCAA ATCCTTGATA TGAATCTTTT GAACCTCAAT CCCTTTGTAC TGGGACAAGA 1920

GATAGTCTTT CAAGCGCGTC ACAAAACTTT CAGTGTTGCC ACTCAAGG 1968

(2) INFORMATION FOR SEQ ID NO: 120:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 7172 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 120:

CCGCATTTTT TATCACTAGA CTCGAGACAT CTTTTGAGTG GCTCTTGCTC TCTGGTTTAA 60

TTTTCTTCCT TGCTCAAGGA CTCCTGCTAT TTCTCTTGGT CGTCCGACTC AAACATCAAT 120

TCGCTGAGAT TTATCCTCAA ATCAATAAAA AGATTCGCTT CTACTATTTA GGGGTTCTCA 180

CCATTGATTT TCTATTTTTT GTTCTCTTAG CCTTCATTAG TTCTCAGCGT TTTTCATCTC 240

TTATGCCAAT CATCACTGCT TGCCATTCTA CTTTTTATTA TATGACAGCT GACTACCTAA 300

GAGAAAACTA TCCAGACTTT TACGACAAAC ACATCTCTTT ATGGGAGTGT CTCTAAAGAA 360

AAGGAGGTTT TAGCATGAAA AAAATCATCT TCATCAAAAC CATTCAACTC CTTGTCATTG 420

ATGGAATCAT GCTGGCATTT TTGACATTTA AAAGGGGGCT TACTTGGGAC TGGATTTTGA 480

TTTATAGCGG TTGGCTCATT TTCTTTCATC CTGTGCTATT GACCTATCTT TCAAACCAAC 540

TTTGTGACCA CTTTAGTTAA CTCTATTCCC AGATTAGACC GAGATTCTGG CGTTTTGCTT 600

TACAAATTCT CCTATGGGAT AGCCTGATGA TTCTCTCCTT GGTGTCTTTA AGTGATATTC 660

CACTTTTCCT TCAGGGAACT CTCCTCATCC TAGGACATCT CATCCCTTCC TATCGCATCT 720

GCCAAAGCCT GAAAAGAGAC TTCCCCCAAG CATATCAAGA ACCGATTTCT TTTTGGAGTA 780

TTTTATGATA GATGAGAAAG ACCAAGCCGA CTGGGCTTGG TCTTTCTTAT CTCTTTTTAG 840

TATCTAGGAT AATGGTAACA GGTCCATTAT TAACCAGCTC AACCTGCATA TCTGCTCCAA 900

AGATGCCTGT CTGAACGGGC ACTTCTTGCG CTAATTTTTG ATTGAAAGCA TCATAGAAGT 960

CTGATGCCAT ATCAGGTTTA GCTGCCCCTG TAAAGgCTGG ACGATTGCCT CTCTTAGTAT 1020

CCGCAAAGAG GGTAAACTGA GAAATAGAGA GGATTTCTCC TTCAATATCT TTGACAGACA 1080

GGTTCATCTT GCCTTCTGCG TCTGAAAAAA TCCGCATATT GACCAGTTTT CTCACAGCAT 1140

AGTCCAAATC TTCCTCTTGG TCCTCTGGTC CAACACCAAC CAGCAATAAA AGTCCCTGAT 1200

TGATTTTTCC CTGAATCTGG CCTTCTATAC TCACTTGGGC TTTTTTAACC CGTTGGATAA 1260

TGATTTTCAT AATAGCCTTT CTAGTAAGAG CTAGGACAAC TAGCCGTTGG TCCGTTTGAC 1320

AGAGTAAACT TCTGGCACAC TCTTAATTTT ATCGACAACC GTGGTCAGTG TAGAGAGGTT 1380

GGCAATACCG AAGgACACAT GGATATTAGC AAACTTCATA TCCTTGGTTG GTTGGGCATT 1440

GACCGTTGAA ATATTCTTGG TTGTATTTGA AAGAACTTGC AGTACATCGT TCAACAGTCC 1500

TGTACGGTTG AGACCGTAGA TATCGATATG GGCCATATAC TCCTTATTTG AGCTAGGGTA 1560

CTGGTCTTCC CATTCCACAT CAAGGAGACG TTGCTCGTAG TTTTCTTGGG CACGCAGGTT 1620

CATACAGTCC ACACGGTGAA TAGCCACACC ACGACCCTTG GTAATGTAGC CAACAATATC 1680

GTCACCAGGC ACGGGGTTAC AACACTTAGC AATCCGCACT AGGAGACCAG AAGCACCTTC 1740

AATAACCACT CCCCCCTCAT GCTTGACCTT GAGGGTTTCT TTATTTTCAA CCTTGACCTC 1800

GCCACCTTTG ACAAGCTCCT CTGCCTCAGC TTTGGCCTTG GCACGCTCTT CCTCACGGCG 1860

TTCCTTTTCA GTCAGACGGT TAAAGACGGT AATCGCACCG ATTTCCCCAA AACCAATGGC 1920

CGCAAAGAGG GAGTCTTCTG TCTTGTAACT GGTCTTTTGC AGAACTTGAT CCATGTGGCG 1980

CTTGTCCATA AATTTATTTG CCACATAGCC ATTTTCTTGG AACTGAGCCA TCAGCATCTC 2040

ACGACCCTTG TTGACAGACA ATTCCTTATC TTGGTTTTTA AAGAACTGGC GAATCTTATT 2100

GCGCGCCTTG CTAGTCTTGA CCATATTGAG CCAGTCACGG CTAGGTCCAA AGGAGTTCGG 2160

GTTGGCGATA ATTTCAACCT GATCCCCTGT CTTTAACTTG GTTGTCAGTG GAACCATGCG 2220

GCCATTGACC TTGGCACCAG TTGCTTTTTC ACCGACCTTG GTATGGATTT CGTAGGCAAA 2280

ATCAATCGGT CCTGAATCTT TGGGAAGGGA ACGGACAGCT CCATCTGGGG TAAAAACGTA 2340

AATCTCCTCA GCCAAATAGT TTTCCTTAAC AGAGTCCACA AATTCCTTAG CATCATCAGC 2400

CTGGTCTTGG AGCTCCATCA TCTCCTTGAT CCAGTTCATT CCAATAGCTG ATTCCTTGCT 2460

GTTAACTTGC CCCTTTATAC CTTTCTTATA AGCCCAGTGA GCCGCAACCC CGTACTCAGC 2520

CACCTCGTGC ATTTCCTTGG TTCGAATCTG GAATTCAATC GGCCCTTTTG GTCCATAAAC 2580

AGTCGTATGG ATAGACTGAT AACCATTGGC CTTGCGGTTG GCGATATAGT CTTTGAAGCG 2640

ACCTGGCATC GGTTTCCAAA ATTCATGCAC GTAACCAAGC ATGGCATAAA CATCACTTTG 2700

GGTATCTAAA ATACAACGAA TAGCAATCAG ATCATAGATT TCCTCAAACC GTTTTCTCTT 2760

GTCCTGCATT TTGCGGAAAA TTGAGTAAAT ATGCTTGGGA CGACCATAAA TCTTCCCTTT 2820

CAAGTGACGT TCTGTCGTAT ACTCCTCTAA TTTTGTGACT ACCTCATCCA CCAAGGCCTC 2880

ACGCTCCCTG CGCTTTTCCT TCATCATATG GGTAATCTTG TAAAACTCCG TTGGATTGAG 2940

ATAACGGAAA GACAAGTCTT CTAATTCCCA TTTGACACTG GAAATCCCCA AACGATGGGC 3000

AAGCGGGGCA TAGATTTCCA TGGTTTCTTT GGAAATACGC TCCTGCTTGT CTTTTCGAAG 3060

ATGTTTCAGG GTCCGCATAT TGTGCAAGCG GTCAGACAGT TTGACCAAAA TAACGCGGAT 3120

GTCCTCAGAC ATGGCCATGA GCATCTTGCG ATGATTTTCC GCTAATTGCT CCTCGATCGA 3180

TTTGTACTCG ACCTTGCCAA GCTTGGTAAC TCCGTCAACA ATCATCCGCA CATCAGGACC 3240

AAACTCTCTT TCCAAATCGT CCAAAGTCGC ATCTGTATCT TCCACCACAT CATGCAAGAA 3300

TCCACAAGCT ACTGTTACAG CATCCAGCTT TAGCTTAGCT AAAATACCTG CCACTTGGAT 3360

AGGGTGAATG ATATAAGGCT CGCCTGATTT GCGATATTGA CCACTGTGGC ATTCAACAGC 3420

ATAGACCAAG GCCTTATGGA CAAAATGAAC ATCCTCTTCC GTTAAATATT CTTTGGTTAA 3480

AGCGACAACT TCTTCGCCTG TTAAATTCAC TTCTTTCGGC ATCTCTACTC TCCAATTCTT 3540

CCTACCATTT TATCACTTTT TTAAGAATAT GAAAACTAGA TTGGAACAGA ATAAGAAAAA 3600

AATAATTCAA AATTGCTTGA TAATTCTGAA TTATTGGTCC GTAATATACT ACGAAGTTAG 3660

ATTTTAAACT TAGGTGATAG AAGGAGAGAT AGAAGAACGG AAACCATATT GTAACCCAAA 3720

GACTTTCTGA CTTCCCCAAT TCCATTGAAG ATACGAAAGA TAAACGGTGG AACTCGTATC 3780

ACATACACTG GTACCTTGAC TGGATTTTGG AATTAATACT AAATGAAAAT CAAAGAGCAA 3840

ACTAGGAAAC TAGCCGCAGG TTACTCAAAG CACCGCTTTG AGGTTGCAGA TAAAGTTGAC 3900

GCGGTTTGAA GAGATTTTTG AAGAGTATAA AAATCCTCAA GATACTTTCT TCTATCCTTT 3960

AGTTTATAAG GAGAATACCT ATGAAAAAAA CTGCTATTTC TATCTTTGCT CTCCTAATGT 4020

TAGGAGTTTG CTGCCTGTTC CTATTCAGCC AGCAAAGCTA TAAAAAACAG TCGTTCAATA 4080

CTATGCTAAC GACCAGAACC TGCCCAGTAG GATAACTTAT AGTGAATATA GCGACAAATG 4140

AGAAGCCAAC TACGGTAGCA CTCTAAACAT CACGTCTATC AAACAAGCTA ATGACGGAGT 4200

TTATGCAACC TATGAAGGGC AATTGACACC TTTCCAATAT TGATAAATTG ATAACCAGCC 4260

TGTCTTCATC TAGTCATGCT GGTTTTTAAG TTCATTTTAA ATCCTTACCT ATTCTCCCTA 4320

ACTGTGCTAT ACTTAATTTA TACTCAATGA AAATCAAAGA GCAAACTAGA AAGCTAGCCG 4380

CAGGCTGTTC AAAGCACTGC TTTGAGGTTG CAGATAAAGT TGACGCGGTT TGAAGAGATT 4440

TTCGAAGAGT ATTAGTACAT TCTTTGAGAT TGGAGCTAGT ATGAAAATCC ATAAAACCGT 4500

GAATCCTGTT GCCTATGAAA ATACCTATTA TCTAGAAGGC GAAAAGCACC TCATCGTCGT 4560

CGATCCTGGT AGTCATTGGG AAGCCATTCG TCAGACAATC GAGAAGATCA ACAAACCGAT 4620

CTGTGCTATT CTCTTGACCC ACGCCCATTA TGACCATATC ATGAGTCTGG ACTTGGTTCG 4680

CGAGACGTTT GGCAATCCTC CTGTCTATAT CGCAGAGAGC GAAGCCAGCT GGCTCTACAC 4740

TCCTGTCGAT AATCTCTCCG GTCTCCCTCG CCACGATGAT ATGGCAGATG TGGTCACAAA 4800

ACCTGCAGAA CACACCTTTG TCTTTCACGA AGAATACCAA CTAGAGGAAT TTCGTTTTAA 4860

GGTTCTACCG ACCCCAGGGC ACTCTATCGG TGGTGTTTCC CTAGTCTTTC CTGATGCTCA 4920

TCTAGTCTTG ACGGGAGATG CTCTATTCCG CGAAACTATC GGACGGACCG ACCTTCCGAC 4980

TGGTAGCATG GAGCAACTCC TTCATAGTAT CCAGACCCAA CTCTTCACCC TACCAAACTA 5040

CGATGTCTAT CCAGGACATG GTCCAGCTAC TACTATCGCT CACGAAAAGG CCTTCAATCC 5100

CTTTTTCTAG CAAGATGATG ACAATCGAAA TTTAAGTAAA CTATCCAGCA AATCTTTCTA 5160

TTACAAAAGG CATCCTATCA AGGTTTTCAC ACATGATTGG ATGCCTTTTT TCTGATGACT 5220

AGATTTTTTG CATTACCAAA TAATCACGCG CTCCTCTGGT GAACGCCACA TTCCGTCTCC 5280

TTCTTTGACA TCATAGGTTG TAAAGAAATC GTCGAAGTTT GGTACTTGCA CATTGACACG 5340

GAGTTTGGCT GGTGCGTGCA CATCGACGCT AGCCAAAAGT TTCATAAATT CTGGTCGACC 5400

TTTCATGCGC CAGATGCGAC CGAAGTTGTA GAAGAACTCT TCTGCTGAGA AGTCTGCTTC 5460

TCTCTTAGCT GCTTCAAGCG CTGCTGCGAT TCCTCCCAAG TCAGCCACGT TTTCTGATAC 5520

AGTCAATTTA CCGTTAATGG TTGCTCCATA AGAATCCTGT CCATCAAATT GGTCAATGAC 5580

TTTTTGTGTT TTCTCCTTGA AGGCAGCATA GTCGCTCTCT GTCCACCAAT CCTTGAGGCT 5640

ACCATTTTCG TCAAAGGAAG CCCCGTTAGT ATCAAAGGCG TGGGAAATTT CATGGGCAAT 5700

CACTGCCCCA ATACCACCGT AGTTAGCAGA AGATGACTGA TGCAAGTCAT AGAAAGGCGC 5760

CTGTAAAATG GCCGCTGGAA AGACAATCAG GTTCTTCTGA GGATTGTAGT AGGCATTGAC 5820

CATATGAGCA GGCATGCCCC ATTCCTTATA ATCTACAGGC TGGTTCCACT TACTCCAACT 5880

GTGCTTGATT TCCACACGCG CAAAGGCTAG AGCATTCTCA AAAAGACTGG CAGTTTCATT 5940

CACTACCTTA TCCTTGTAAC GTGCAGGCAA TTCTTCTGGA TAGCCAATAT AAGGTTTGAT 6000

CACATTGAGC TTCACGATAG CCTGTTTACA GGTTTCTGGA GTGAGCCAGT CATTCTTAAG 6060

CAGACGCTCC TTATAAACAT CAATCATGGT TGCCACTTTT TTCTCCACAT CCGCCTTGGC 6120

TTCTGGAGAG AACTTCTCAC GGGCGTACCA AAGACCCAGG GCTTGCTTGA AAGGTTCTTG 6180

TGCTAGATGA TAAGCTGCTT TGACCTTATC TTTTGCCTCT GGAACTCCAG AAAGGGCACG 6240

GCTGTAGGCA CCAGACAAAA CACGGATATC CTCTGTTAAA TAGCTGGTTG AAAGATTGAC 6300

AACACTCAAA ATCAAGGTTG CTTTAAGGAG AGACCAGGCT TCCTCACTGT AGAATTGCTC 6360

TGCTGCTTGC CAGAAACGTT CCTCGTCTAC AATAACCTTG TCTGGTAATT GCCCAATAAC 6420

TGCTTTGAAG AAGTCATCCA AAGGTAGGGC AGGCGCGAAT TTCTTGAAAT CTTCGTAAGA 6480

ATATGGATGA TAGAGTTTAG CATATTCTGA ACTTTCTTCA TTAGAGAGCA CCACTGCCGC 6540

AACTCGGCGG TCCAATTCAA GTCTTTTTTC TAGCAAGTCT TCAATTTCTT CATCAGAGAA 6600

ATCATAAGCC TTGAGGAGAT TTGCGCTGCT TTCTTTCCAA AGAGTCAAGA GCTCTTCGCG 6660

CTGAGGATGT TCTTCTGCAT AGTAGGTCGT ATCTGGCAAG ATTGTGCTTG GAGCGCTAGC 6720

CCATAGAACA TTGATTCTAG CATCCATAAA GTCTGGCGAT ACACCAAAAG GAAGGAAGTT 6780

TGGTTTTCCT GCAAGCTCAA ACTCTGCTAG TTTAGCTGTA AAATCCGCAA AAGTCTCCAA 6840

TTCTTGGAAT TCTTTAAGGA GTGGTAAGAC AGGTGTGATA CCGTCAGCTT CTCTCTTGTC 6900

AAAATCACGA ACTAGGCGGT GGTATTTGAC AAAGTTTTCC AAGATAGCAT CCTCAGGCAC 6960

TTCTTCACCT GCTAACCACT TGTCTGTTGT CGCCAGCATC AGGTCTTCAA TTTCCTGGTC 7020

TAAATCAACA AAACCTCCTG TTTGAGACTT ATCTGCTGGG ATTTCAGCTG TCTGTTGCCA 7080

TTCTCCATTG ATAGCATCAT AAAAATCATC TTGATAACGT GTCATCTTGT TCTCGCTTTC 7140

ATTTGTATTT GCATTTATCT TAACAAAAAT CG 7172

(2) INFORMATION FOR SEQ ID NO: 121:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 4518 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 121:

CGGGAAGTTA TGCGATCTAG ACTTCGTTCC TGTACAGCTA CTTTCTCAGG TGGTCTTGTT 60

GTTTGTATGA GTTTGTTTAG AGAGGATCTT TCTATGTCTT TCTTTCTTAT TTTTGTTTTA 120

TATGCTTTTC TGATTTCTTA TCTAATTTAT GGTTATTTCA GACTAAAAAG GAAATACCGA 180

GTAGATGAAT AGCAAGGTTC TAGGTCTTCA GATTGATTTT TAGCACTCTT GATAAAAGAG 240

TGCTAATTTT TTGAGTTTTT GTCTTGACAT TCTCTTCTAA GGGTGTATAA TAGAATCATG 300

AGTTAGCACT TGGATGCATT GAGTGCTAAT TGATCAGACA GAGAGGAGTG ATGAGATGGT 360

TACAGAGCGT CAGCAGGATA TTTTAAATCT GATTATTGAC ATCTTTACCA AAACGCACGA 420

ACCTGTCGGA TCAAAAGCCT TGCAAGAGTC TATTAACTCT AGCAGTGCAA CCATTCGTAA 480

TGACATGGCG GAACTAGAAA AACAAGGGTT GCTTGAGAAG GCTCATACTT CAAGTGGTCG 540

GATGCCAAGT GTTGCTGGTT TTCAGTACTA TGTGAAACAC TCACTGGATT TTGACCGGCT 600

GGCTGAAAAT GAGGTATATG AGATTGTCAA AGCCTTTGAT CAGGAATTCT TCAAATTGGA 660

GGATATTCTG CAAGAGGCTG CTAACTTACT AACAGACCTG AGTGGCTGTA CGGTAGTGGC 720

ACTGGATGTT GAGCCGAGCA GGCAACGTTT GACAGCCTTT GATATCGTTG TTTTGGGGCA 780

ACATACAGCC TTGGCGGTAT TTACCCTAGA CGAGTCGCGA ACGGTTACTA GTCAGTTTCT 840

GATTCCAAGG AACTTCTTGC AGGAGGATTT GCTGAAACTG AAGAGCATCA TTCAGGAACG 900

TTTCCTCGGT CACACCGTTT TAGATATTCA CTACAAGATT CGGACGGAGA TTCCGCAGAT 960

TATCCAGCGT TACTTTACAA CAACGGATAA TGTCATCGAT CTCTTTGAAC ACATCTTTAA 1020

GGAAATGTTC AACGAAAACA TTGTGATGGC GGGCAAGGTC CATCTCTTGA ATTTTGCCAA 1080

TCTAGCAGCC TATCAGTTCT TTGACCAACC GCAAAAGGTG GCCTTGGAGA TTCGTGAGGG 1140

GTTGCGTGAG GATCAGATGC AAAATGTTCG TGTTGCAGAC GGTCAAGAGT CCTGTTTAGC 1200

TGACCTAGCG GTAATCAGTA GTAAGTTCCT CATTCCTTAT CGGGGAGTTG GAATTCTAGC 1260

CATTATCGGT CCAGTTAATC TGGATTACCA ACAGCTAATC AATCAAGTCA ATGTGGTCAA 1320

CCGTGTTTTG ACCATGAAGT TGACAGATTT TTACCGCTAC CTCAGCAGTA ATCATTACGA 1380

AGTACATTAA GATTGAAATC ATTAAAGGAG GCGAACATGG CCCAAGATAT AAAAAATGAA 1440

GAAGTAGAAG AAGTTCAAGA AGAGGAAGTT GTGAAAACAG CTGAAGAAAC AACTCCTGAA 1500

AAGTCTGAGT TGGACTTGGC AAATGAACGT GCAGATGAGT TCGAAAACAA ATATCTTCGC 1560

GCTCATGCAG AAATGCAAAA TATCCAACGC CGTGCCAATG AAGAACGTCA AAACTTGCAA 1620

CGTTATCGTA GCCAGGACTT GGCAAAAGCA ATCTTACCAT CTCTTGACAA CCTTGAGCGT 1680

GCACTTGCAG TTGAAGGTTT GACAGATGAT GTGAAGAAGG GCTTGGGGAT GGTGCAAGAA 1740

AGCTTGATTC ACGCTTTGAA AGAAGAAGGA ATTGAAGAAA TCGCAGCAGA TGGCGAATTT 1800

GACCATAACT ACCATATGGC CATCCAAACT CTCCCAGCAG ACGATGAACA CCCAGTAGAT 1860

ACCATCGCTC AAGTCTTTCA AAAAGGCTAC AAACTCCATG ACCGCATCCT ACGCCCAGCA 1920

ATGGTAGTGG TGTATAACTA AGATATAAAG CCCGTAAAAA GCTCGCAGTA AAAATAGGAG 1980

ATTGACGAAG TGTTCGATGA ACACAAGAAA ATCTATCTTT TTTACTCAGA GCTTAGGGCG 2040

TGTTCGATTC GGCAATTCTG ACGGTAGCTA AAGCAACTCG TCAGAAAACG GCAATCGCTA 2100

TGGCGTTTGC CTAGCTTCCT TACTAACTCG TCGTCGAAAT AAAATCGATT TCGACTCCTC 2160

GTGTCGCAAT TTACATAATA GAAAACTTGT CCGAAACGAC AATAAACTAT GAAGAAAGAT 2220

AAAATATGTT TGGCTTTGTA ATAGTGAGCG AAGCGAACCA AACACGATAC TCTTCGCCGT 2280

GGCGCTATTT GCGCAAATTT TGAGACCTTA GGCTCAAAGT TTAGTCAAAG AGATTGACGA 2340

AGTCAAGCTC TGACGGCGTC GCCACTGTCG CCACTTAAGA AGAGTATCAA AAAGAAAAAT 2400

AGAAAATTAA CTAACAAGGA GAAAAACACA TGTCTAAAAT TATCGGTATT GACTTAGGTA 2460

CAACAAACTC AGCAGTTGCA GTTCTTGAAG GAACTGAAAG CAAAATCATC GCAAACCCAG 2520

AAGGAAACCG CACAACTCCA TCTGTAGTCT CATTCAAAAA CGGAGAAATC ATCGTTGGTG 2580

ATGCTGCAAA ACGTCAAGCA GTTACAAACC CAGATACAGT TATCTCTATC AAATCTAAGA 2640

TGGGAACTTC TGAAAAAGTT TCTGCAAATG GAAAAGAATA CACTCCACAA GAAATCTCAG 2700

CTATGATCCT TCAATACTTG AAAGGCTACG CTGAAGACTA CCTTGGTGAG AAAGTAACCA 2760

AAGCTGTTAT CACAGTTCCG GCTTACTTCA ACGACGCTCA ACGTCAAGCA ACAAAAGACG 2820

CTGGTAAAAT TGCTGGTCTT GAAGTAGAAC GTATTGTTAA CGAACCAACT GCAGCAGCTC 2880

TTGCTTATGG TTTGGACAAG ACTGACAAAG AAGAAAAAAT CTTGGTATTT GACCTTGGTG 2940

GTGGTACATT CGACGTCTCT ATCCTTGAAT TGGGTGACGG TGTCTTCGAC GTATTGTCAA 3000

CTGCAGGGGA CAACAAACTT GGTGGTGACG ACTTTGACCA AAAAATCATT GACCACTTGG 3060

TAGCAGAATT CAAGAAAGAA AACGGTATCG ACTTGTCTAC TGACAAGATG GCAATGCAAC 3120

GTTTGAAAGA TGCGGCTGAA AAAGCGAAGA AAGACCTTTC TGGTGTAACT TCAACACAAA 3180

TCAGCTTGCC ATTTATCACT GCAGGTGAGG CTGGACCTCT TCACTTGGAA ATGACTTTGA 3240

CTCGTGCGAA ATTTGACGAT TTGACTCGTG ACCTTGTTGA ACGTACAAAA GTTCCAGTTC 3300

GTCAAGCCCT TTCAGATGCA GGTTTGAGCT TGTCAGAAAT CGACGAAGTT ATCCTTGTTG 3360

GTGGTTCAAC TCGTATCCCT GCCGTTGTTG AAGCTGTTAA AGCTGAAACT GGTAAAGAAC 3420

CAAACAAATC AGTAAACCCT GATGAAGTAG TTGCTATGGG TGCGGCTATC CAAGGTGGTG 3480

TGATTACTGG TGATGTCAAG GACGTTGTCC TTCTTGATGT AACGCCATTG TCACTTGGTA 3540

TCGAAACAAT GGGTGGAGTA TTTACAAAAC TTATCGATCG CAACACTACA ATCCCAACAT 3600

CTAAATCACA AGTCTTCTCA ACAGCAGCAG ACAACCAACC AGCCGTTGAT ATCCACGTTC 3660

TTCAAGGTGA ACGCCCAATG GCAGCAGATA ACAAGACTCT TGGACGCTTC CAATTGACTG 3720

ATATCCCAGC TGCACCTCGT GGAATTCCTC AAATCGAAGT AACATTTGAC ATCGACAAGA 3780

ACGGTATCGT GTCTGTTAAG GCCAAAGACC TTGGAACTCA AAAAGAACAA ACTATTGTCA 3840

TCCAATCGAA CTCAGGTTTG ACTGACGAAG AAATCGACCG CATGATGAAA GATGCAGAAG 3900

CAAACGCTGA AGCCGATAAG AAACGTAAAG AAGAAGTAGA CCTTCGTAAT GAAGTAGACC 3960

AAGCAATCTT TGCGACTGAA AAGACAATCA AGGAAACTGA AGGTAAAGGC TTCGACGCAG 4020

AACGTGACGC TGCCCAAGCT GCCCTTGATG ACCTTAAGAA AGCTCAAGAA GACAACAACT 4080

TGGACGACAT GAAAACAAAA CTTGAAGCAT TGAACGAAAA AGCTCAAGGA CTTGCTGTTA 4140

AACTCTACGA ACAAGCCGCA GCAGCGCAAC AAGCTCAAGA AGGAGCAGAA GGCGCACAAG 4200

CAACAGGGAA CGCAGGCGAT GACGTCGTAG ACGGAGAGTT TACGGAAAAG TAAGATGAGT 4260

GTATTGGATG AAGAGTATCT AAAAAATACA CGAAAAGTTT ATAATGATTT TTGTAATCAA 4320

GCTGATAACT ATAGAACATC AAAAGATTTT ATTGATAATA TTCCAATAGA ATATTTAGCT 4380

AGATATAGAG AATTATATTA GCTGAACATG ATAGTTGTAT CAAAAATGAT GAAGCGGTAA 4440

GGAATTTTGT TACCTCAGTA TTGTTGTCTG CATTTGTATC GGCGATGGTA CCGTATCTGA 4500

CGAACGTTCA GCTTATAT 4518

(2) INFORMATION FOR SEQ ID NO: 122:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 8145 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 122:

TGCTATTTTC GATTCCCTTG GGCGTTTTGA TTGCCTTTGC CTTGCAAGTC CATTGGAAGC 60

CCCTCCATTA TCTGATTAAC ATTTACATCT GGGTTATGCG AGGAACCCCC TTACTCTTGC 120

AACTGATTTT TATCTATTAT GTGCTCCCAA GTATTGGGAT TCGTTTAGAC CGCCTTCCTG 180

CAGCTATTAT TGCCTTTGTT CTCAACTATG CAGCTTACTT TGCAGAAATT TTCCGTGGGG 240

GAATTGACAC TATTCCAAGA GGACAGTATG AGGCCGCCAA GGTCTTGAAG TTTAGCCCTT 300

TTGACAGAGT GCGCTATATT ATCTTGCCCC AAGTGACCAA GATCGTTCTT CCTAGTGTCT 360

TTAATGAAGT TATGAGTTTG GTCAAGGATA CTTCTTTGGT CTATGCTCTC GGAATTTCAG 420

ACCTTATCTT GGCTAGTCGA ACAGCTGCTA ACCGCGATGC TAGTCTAGTT CCTATGTTCT 480

TGGCAGGAGC CATTTATTTG ATTTTGATTG GGATTGTGAC AATTATTTCC AAAAAAGTTG 540

AGAAGAAGTA TAGTTATTAT AGATAGGAGG CTGCCATGTT AGAATTACGA AATATCAATA 600

AAGTCTTTGG AGACAAACAA ATCCTGTCTA ATTTCAGTCT AAGTATTCCT GAAAAGCAAA 660

TCCTGGCTAT CGTTGGACCT TCTGGTGGAG GTAAGACAAC TCTTTTACGT ATGCTTGCAG 720

GTCTTGAAAC CATTGATTCA GGGCAAATCT TTTATAATGG ACAACCTTTA GAGCTGGATG 780

AATTGCAGAA GCGCAATCTA CTGGGATTTG TCTTCCAAGA TTTTCAACTA TTTCCTCATC 840

TATCAGTTCT GGAAAATTTG ACTTTATCGC CTGTGAAGAC CATGGGAATG AAGCAGGAAG 900

AGGCTGAGAA GAAGGCGAGT GGACTCTTGG AACAGTTAGG ACTAGGAGGA CACGCAGAGG 960

CCTATCCTTT CTCACTATCT GGTGGGCAAA AGCAGCGGGT GGCTTTGGCG CGTGCTATGA 1020

TGATTGACCC AGAAATCATT GGCTACGATG AACCAACTTC TGCCCTGGAT CCAGAATTAC 1080

GTTTGGAAGT GGAGAAGCTA ATCTTGCAAA ATAGGGAACT TGGGATGACC CAGATTGTGG 1140

TTACCCATGA TTTGCAGTTT GCTGAAAATA TCGCAGATGT ATTATTGAAA GTAGAACCTA 1200

AATAGGAGGA AAAATGGATG AAAAAATGGA TGCTTGTATT AGTCAGTCTG ATGACTGCTT 1260

TGTTCTTAGT AGCTTGTGGG AAAAATTCTA GCGAAACTAG TGGAGATAAT TGGTCAAAGT 1320

ACCAGTCTAA CAAGTCTATT ACTATTGGAT TTGATAGTAC TTTTGTTCCA ATGGGATTTG 1380

CTCAGAAAGA TGGTTCTTAT GCAGGATTTG ATATTGATTT AGCTACAGCT GTTTTTGAAA 1440

AATACGGAAT CACGGTAAAT TGGCAACCGA TTGATTGGGA TTTGAAAGAA GCTGAATTGA 1500

CAAAAGGAAC GATTGATCTG ATTTGGAATG GCTATTCCGC TACAGACGAA CGCCGTGAAA 1560

AGGTGGCTTT CAGTAACTCA TATATGAAGA ATGAGCAGGT ATTGGTTACG AAGAAATCAT 1620

CTGGTATCAC GACTGCAAAG GATATGACTG GAAAGACATT AGGAGCTCAA GCTGGTTCAT 1680

CTGGTTATGC GGACTTTGAA GCAAATCCAG AAATTTTGAA GAATATTGTC GCTAATAAGG 1740

AAGCGAATCA ATACCAAACC TTTAATGAAG CCTTGATTGA TTTGAAAAAC GATCGAATTG 1800

ATGGTCTATT GATTGACCGT GTCTATGCAA ACTATTATTT AGAAGCAGAA GGTGTTTTAA 1860

ACGATTATAA TGTCTTTACA GTTGGACTAG AAACAGAAGC TTTTGCGGTT GGAGCCCGTA 1920

AGGAAGATAC AAACTTGGTT AAGAAGATAA ATGAAGCTTT TTCTAGTCTT TACAAGGACG 1980

GCAAGTTCCA AGAAATCAGC CAAAAATGGT TTGGAGAAGA TGTAGCAACC AAAGAAGTAA 2040

AAGAAGGACA GTAAGATAAA ATAGTGGCTG AAACTGCGTT TTGATTAGCA AAACGTAGTT 2100

TTTTTTGTAA TCTAGGAAAA CGATAATAGC GATTGAATAT GGATAATTGA ATATGGAATA 2160

GCCCACTGTG ATTTCTAAAA CATTGTTAAA AATTGATTTG ACTTCCAAAA TTAAAATGTT 2220

CTGTAATGAA ATACTGATGT AACTGTTTTA GGAACAATAA AACGCATAAT ATCAAGGTTT 2280

TTGCACCTTA CATTATGCGT TTTTGTGATT TTAAGACTTG TTAGCTGATT TTTTACAATC 2340

CTGCGAAATC TTTGATTTCT TGTGCTGACA TTGAAGAGTC GCAACGGACG TTGATTTGTC 2400

CATCTGTAAT ATGAACAAAA CCTGGTACAG TTGGGATTCC ATAGCGTGAG CGGAATGCTT 2460

GCAAATCATT GAGTTGGCTT GGTTCTTCAC TATTGATGAA GTAAATGTGA GCTTTGGTTT 2520

CAGCTACGAC ACCTGACAAT GTACCTGCAA ATTTACGGCA GTAAGGGCAA GTTTTGCGAC 2580

CGATAAAGAA GGTTGCAGTT TCTTTTTTAT CAAGAGCTTC TTGCGCACGC ACAACTGTAG 2640

TGACTTCAAG GTCTTTGATG TTATCTAAAA ATTGTTCCAT GAGATTACCT CGCTTTCATT 2700

GATAAGTCTA GTATGCCATA AAGTTTCTAA AATTGCTTAG ATTTGATACG AAAAAAGATG 2760

AGGTTGGTTG GTCTCATCTT TTATAGGTCT TTATTTTACA AATGCATTGA TTTCTGCTTC 2820

GATGTTAGCA ATCTTAGCTT GTGATTCTTC GTTGGTTTCC CCTACAACTG CAATGTAGAA 2880

CTTGATTTTT GGTTCTGTAC CTGAAGGGCG AACGGCAATC CATGAACCGT CAGCAAGTGT 2940

GTATTTCAAC ACATCACTTG GAGGAGTTGT CAAGTTTGTA ACAGTACCGT CAGCAACAGT 3000

AGCAGTTTGT GCCTTGAAGT CTTCTACGAC AGTGATAGCT GTTGCGTTCC ATTCTGTTGG 3060

AGCATTGTTG CGGAATTTAG CCATAATCGC TTTGATTTGT TCAGCACCAT CGACACCTGA 3120

AAGAGTAACA GAGATTGTTT TTTCTGCGTA GTAGCCATAT TCTTTATAGA TTTCTTCGAT 3180

ACCGTCAGCA AGTGTCAAAC CACGAGAACG GTAGTAGGCA GCAAGTTCAG CAACTACAAG 3240

AACGGCTTGG ATGGCATCTT TATCACGTAC AAATGGTTTA ATCAAGTAAC CGAAGCTTTC 3300

TTCAAATCCC ATCATGTAAG TGTGGTTGTG TTTTTCTTCG AATTCTTGGA TTTTTTCAGC 3360

GATAAATTTG AAACCTGTCA AGACGTTGAA CATAGTTGCG CCGTAGCTTT CAGCAATCTT 3420

CGTTACCAAG TCAGTTGAAA CGATAGATTT GCAGAGAGCG GCATTTTCAG GAAGAGTTCC 3480

AGCGTTTTTG TGAGCTTCCA AGATGTATTT AGCCATGATA GCACCGATTT GGTTACCTGA 3540

AAGGTTGAGG TAGCTACCAT CTTTTTGAAG AACTTCAACA CCAACACGGT CAGCGTCTGG 3600

GTCAGTTGCG ACAAGAACAT CTGCACCAAC TTGACGACCA AGTTCTTCAG CAAGGGCAAA 3660

GGCTGCTTGG CTTTCTGGGT TTGGAGATGT TACAGTTGAA AAGTCTGGGT CAGCAGTTGC 3720

TTGCGCTTCA ACAACTTGAA CAGAGTCAAA TCCTGCTTGG GCAAGAGCAC GACGAGCCAA 3780

CATTTCACCA GTACCATGAA GTGGTGTGTA GACAATCTTC ATGTCTTTAC CAAATTCTTC 3840

AATCAAGGCT GGGTTGATGT TTATGTCCTT AACCTCTTTA AGGTATTCTA TGTCAACAGC 3900

TTCGCCGATA ACTTCAATCA AGCCAGAAGC TTTTTCAGTT TCCACATCAG CAACTTCAAC 3960

TGCAAATGGG TTTTCGATTG CACGGATATA AGTAGTCAAA GCGTCCGCAT CGTGTGGAGG 4020

CATTTGTCCA CCGTCTTCAC CGTAAACCTT GTAACCGTTA AATGGAGCAG GGTTGTGGCT 4080

GGCTGTGACC ATGATACCTG CGAAACAGTT GAGATGACGA ACTGCAAATG ATAGTTCTGG 4140

AGTCGGACGA AGGCTTTCAA ATACGTAAGA TTTGATGCCG TGTTTAGCAA GAACTGCCGC 4200

AGATTCAAAG GCAAACTCAG GTGAGAAGTG ACGGCTATCG TAGGCAATTG CTACACCGCG 4260

TTCTTTCTCG TTTCCACCTT TTGACTCAAT CAAACGAGCC AATCCTTCAG TAGCTTGGCG 4320

AACAACGTAG ATGTTGATAC GGTTTGTACC AGCACCAACC AAGCCACGCA TACCTGCAGT 4380

ACCAAATTCA AGATTTGTAT AGAAGGCATC TTCCTTAGTT TTTTCGTCCA TATTTTCCAA 4440

ATCTTGACGA AGGTAGTCAC GAAGCTCCAC AAAATCAACC CATTTCTGGT AATTTTCTTG 4500

GTAAGACATT CAAATTCTCC TTTATTTTTA AAACATTTAA TCAGTTTAAT TATATCATTT 4560

TTTTTAGTTT TAGTAAAACC TTATCTGCTT CGAACATCTC TTCAAACCAG GTCAGATTGA 4620

ATTTTGGGGT TATATGATGT TGAGGCTAGG AAAAATTCAA TTTCAGTAAA AAAAGTAAGT 4680

CTTCTCATAA CAAAACATTG ATATAGTTAC TTAGTTTTAA ACAAGCATAT TATAATAAAG 4740

CTATGGCATA TAGTACTGAT TTTAAACAGC GAGCATTAGA TTACATCAAA GAGGGGCACA 4800

GCCATGTCGA GGCAGCCAAG TTTTTTGGTG TTGGCGTCAG AACTCTCTTC ACGTGGGAAA 4860

AGAAAGACGT GAACAAGAAC ACATAGAGAG GAAAAAGCGA GTCGTCAAAA ACCGAAAGAT 4920

TCCTTTAGAG GAATTGAAAG CCTTTGTAGA GGCTCATCCA GATGCTTTTT TACGGGAAAT 4980

TGCGGCACAT TTTGATTGTG CTGTTCCTTC AGTATGGGCA GCTTTAAAGC AGATTAAGGT 5040

CACTTTAAAA AAAGATGACG AGCTTTAAGG AACAAGACCC AGAAAAGTAG CCTTATTTCT 5100

TAAGAATTTT AATAGTTTAA AGCACCTAGC ACCTGTTTAT ATTGATGAAA CAGGAATCGA 5160

CCGCTATCTC TATCGTCCTT ATGCAGGGGC TCCTAGAGGG GAGAAAGTCT ATGAAAAGAT 5220

TAGCGGACGT CGTTTTGAGC GAACTTCAAT TGTTGCAGGA CAAGTAGACG GAGAGTTTAT 5280

AGCTCCCATG ATTTACAAGA AAAGCATGAC AAGCGATTTC TTTGTGGAGT GGTTCAAAAC 5340

GCAACTCCTA CCTGCTTTGA AGACACCTCA TGTTATTGTC ATGGGCAATG CTGGTTTTCA 5400

TCCCAAGAAC ATTTTGGATG AACTCTGCAT CCAAGATAAA CACTTTTTCT TACCTCTACC 5460

ACCTTATTCA CCGGATTTGA ATCCTATTGA GCAAGCTTGG GCTATCTTGA AAAAGAAAGT 5520

GACGGATGTA TTAAGGGAAG TTCCAACTAT TTTTGAATGT TTGGAATGCT TTTTTAAAAC 5580

TAGATGACTA TAACGGTTCT AAAGGAACCT ATCGAGTAGT CATTAAAACT AAGGATACTG 5640

CTGGTTAAGA GAAGACGGTA TACAATCAAA CCATTCACCG TGTAGCCGAA ATCGTTCAGA 5700

ATGAAGACTT GTATCAGAAT GAAGACTTGT ATAAGAAAGG TTTGAATGTT GAACTTGCGC 5760

ACCAACAAAT TAAGGGATTT TTTGAAGCAG AGTTTAAAAA TCGTATTAAT GGAGTTCTTA 5820

ATACTAAAAT AAAAAATAGT ACATTAAATC GTGTAAATAA AAAAACTATA CACCAGAGCA 5880

ACAAAAACTC CATGATCAAT TTGAAGCAGA AGCAACGGAA GATGCTAAAA AACAAGGCGA 5940

TATTGTGTTG AATGTTGACC AGGATTTCAT GAGCATATCT AAGTCTAATA AAAGTGGTTC 6000

AGACTGGAAG AAAACTTTCA CAGTGAGGAT AACCAATAGG CTAGCAAATG ACTTGAATAA 6060

TGTCTTGAAA CAGGTTGATA AAGATACTCC TAATACCCCA ACTTGGCTAA ACTCAGCTGC 6120

TTCTAAAGCT AAAGATGATG ACAGAGTATA TAAACTACTG AAGACTCTTA TACCAGGAGA 6180

AAATTACCTA TCATGTTAAG GATAATCAGC TAGAAGTAGA AACAGATAAA TACACATATA 6240

CTGCCGCTAG AAATGGTAGT AAGGAAGTTG GTATTCAAGA GTCAGATATA GCAGCAACTC 6300

TAAGTGCCGA TGAATATAAT TCTAATCGCC AAACTTTTGA GAGAGAATAC AAATACAAAA 6360

GCAAATGCCC TTAATAATGG TTGGGCTAGA TCTGGTTCTG AAGAGTTCAA AAAGTTCTCC 6420

CACTTTGTAG GGGTAGACAA AGGGATTGTG CGAACGAATG TACTGACTGG TAAAAAACTA 6480

TCTGATAAGA TTAGGAAAGA AGTGGGCTCT GGAGATAGCA AACTAGGAAA AGGCGGCTAT 6540

TTCTCTACTG GGGATGTTCT ATTAGGAAAA GATGTTGTTT CTTATACCGT ACAAGTATTT 6600

TCAGAGAATA ATGAAAGAGT AGGAGTAAAC ACTCAAAGTC ACCGTGTTCA GTATAATCTC 6660

CCAATTCTAG CTGACTTTTC AGTCATCCAA GATACTGTGG AACCATCACG AACCGTTGTT 6720

GAAAAAATCA TTCCAAAACT AAATATTCCC GAAGAAGAGA AAGGGAAAAT AACCGAAGAA 6780

ATCAAGAAAA AGAAAAAAAC CTCAGAATTG GCAGAACTAA TCTCAGAAAA TGTGAAAGTT 6840

CGCTATGTTG ATGAACAAGG GCGTTTGCTA TCATTGAAAA ATGATACTGG AATTGGAGAA 6900

AAAGAAAGTG ACGGAACCTA CATTACCAAT AAAAAACAAC TGATTGGTAC CAGCTATAAT 6960

GTCACAGATA AAAAACTCAG TAGCATGACT ACTACTGACG GAAAATATTA TACTTTTAAA 7020

GAAGCAGATA CAAATTCTGC AAGTTTAACT GGGAATATTG TAAGCGAAGG TAGAACAGTG 7080

ACCTTAGTTT ATAGAGAAAG CGAAGCGCCA ACCACTGCTA CAGTAACAGC CAATTACTAT 7140

AAAGAAGGTA GGCAAGAGAA GTTGGTAGAG TCTGTTATAA AAGCTGATTT AGCGATAGGT 7200

TCTGAGTATA CCACAGAATC AAAAACTATT GAAGGGAAAA CAACAACTGA GGACAAAGAA 7260

GACCGAGTTA TCACAAGGAA AACAACATAC ACCTTGGTAG CAACTCCTGA AAATGCGTAC 7320

CAGAAGACGG TGCAACAGTT GACTATTACT ACCGTGAGAA TGTTGAGGAA ACAGTGGTTC 7380

CCAAAACAGC AACCTCTACT GAGACGAAGA CTATAACGCG TATCATTCAT TACGTTGATA 7440

AAGTTACGAA CCAAAATGTA AAAGAAGATG TTGTTCAACC TGTAACCTTA AGCCGTACAA 7500

AAACTGAGAA CAAGGTCACG GGAGTTGTAA CCTACGGTGA ATGGACAACA GGAAACTGGG 7560

ACGAGGTTAT ATCTGGTAAG ATTGACAAGT ACAAAGATCC AGATATTCCA ACAGTTGAAT 7620

CACAAGAAGT TACGTCAGAC TCTAGTGATA AAGAAATAAC GGTAAGGTAT GACCGTTTAT 7680

CAACACCAGA AAAACCAATC CCACAACCAA ATCCAGAGCA TCCAAGTGTT CCGACACCAA 7740

ACCCAGAACT ACCAAATCAA GAGACTCCAA CACCAGATAA ACCAACTCCA GAACCAGGTA 7800

CTCCAAAAAC TGAAACTCCA GTGAATCCAG ACCCAGAAGT TCCGACTTAT GAGACAGGTA 7860

AGAGAGAGGA ATTGCCAAAC ACAGGTACAG AAGCTAATGC TACCTTGGCT AGTGCTGGTA 7920

TCATGACCTT GTTAGCTGGT CTAGGATTAG GATTTTTCAA GAAAAAAGAA GATGAAAAAT 7980

AATAGATTTT AGAATCTAGG AACCAGGAAA AGCTCACAGA TGTGGGCTTT TTTCCTGGTT 8040

TTGAGAACGA GGTCTTTCGT AAAGAATAAA AACGCTTACA AGTCTGTTGA ACTGGGAAAC 8100

TATGAATCCT ATTTTTTTAA AAATATTTCC AGAAATCAGT TGCGG 8145

(2) INFORMATION FOR SEQ ID NO: 123:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 8697 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 123:

CGGTACCGGG AACGATACTT AGTCTAATTT TGCACCTTTT CCATGTATGG TAAAGGTTTT 60

TCTTTTTTTA AAAAGGAAAA CGAGAAGAGG AGGTTCTTAT GAAAGCAAGC ATTGCCTTGC 120

AAGTTTTACC CCTAGTACAG GGGATTGATC GGATAGCTGT TATTGATCAG GTCATTGCTT 180

ATCTGCAwAC TCAAGAAGTG ACGATGGTAG TGACACCATT TGAAACGGTC TTGGAAGGGG 240

AGTTTGATGA GCTTATGCGC ATTCTAAAAG AAGCGCTGGA AGTGGCAGGG CAGGAGGCAG 300

ACAATGTCTT TGCCAATGTC AAAATAAATG TAGGAGAGAT TTTAAGTATT GATGAGAAAC 360

TTGAGAAGTA TACTGAGACG ACACATTAGT CTATTGGGCT TTCTCGGAGT ATTGTCAATC 420

TGGCAGTTAG CAGGTTTTCT TAAACTTCTC CCCAAGTTTA TCCTGCCGAC ACCTCTTGAA 480

ATTCTCCAGC CCTTTGTTCG TGACAGAGAA TTTCTCTGGC ACCATAGCTG GGCGACCTTG 540

AGAGTGGCTT TACTGGGGCT GATTTTGGGA GTTTTGATTG CCTGTCTTAT GGCTGTGCTC 600

ATGGATAGTT TGACTTGGCT CAATGACCTG ATTTACCCTA TGATGGTGGT CATTCAGACC 660

ATTCCGACCA TTGCCATAGC TCCTATCCTG GTCTTGTGGC TAGGTTATGG GATTTTGCCC 720

AAGATTGTCT TGATTATCTT AACGACAACC TTTCCCATCA TCGTTAGTAT TTTGGACGGT 780

TTTAGGCATT GCGACAAGGA TATGCTGACC TTGTTTAGTC TGATGCGGGC CAAGCCTTGG 840

CAAATCCTGT GGCATTTTAA AATCCCAGTT AGCCTGCCTT ACTTTTATGC AGGTCTGAGG 900

GTCAGTGTCT CCTACGCCTT TATCACAACT GTGGTATCTG AGTGGTTGGG AGGTTTTGAA 960

GGTCTTGGTG TTTATATGAT TCAGTCTAAA AAACTGTTTC AGTATGATAC CATGTTTGCC 1020

ATTATTATTC TGGTGTCGAT TATCAGTCTT TTGGGTATGA AGCTGGTCGA TATCAGTGAA 1080

AAATATGTGA TTAAATGGAA ACGTTCGTAG AATTAGAATG TTTCTGAAAA AGAAAAGAGG 1140

AAATCAAAAT GAAGAAAACA TGGAAAGTGT TTTTAACGCT TGTAACAGCT CTTGTAGCTG 1200

TTGTGCTTGT GGCCTGTGGT CAAGGAACTG CTTCTAAAGA CAACAAAGAG GCAGAACTTA 1260

AGAAGGTTGA CTTTATCCTA GACTGGACAC CAAATACCAA CCACACAGGG CTTTATGTTG 1320

CCAAGGAAAA AGGTTATTTC AAAGAAGCTG GAGTGGATGT TGATTTGAAA TTGCCACCAG 1380

AAGAAAGTTC TTCTGACTTG GTTATCAACG GAAAGGCACC ATTTGCAGTG TATTTCCAAG 1440

ACTACATGGC TAAGAAATTG GAAAAAGGAG CAGGAATCAC TGCCGTTGCA GCTATTGTTG 1500

AACACAATAC ATCAGGAATC ATCTCTCGTA AATCTGATAA TGTAAGCAGT CCAAAAGACT 1560

TGGTTGGTAA GAAATATGGG ACATGGAATG ACCCAACTGA ACTTGCTATG TTGAAAACCT 1620

TGGTAGAATC TCAAGGTGGA GACTTTGAGA AGGTTGAAAA AGTACCAAAT AACGACTCAA 1680

ACTCAATCAC ACCGATTGCC AATGGCGTCT TTGATACTGC TTGGATTTAC TACGGTTGGG 1740

ATGGTATCCT TGCTAAATCT CAAGGTGTAG ATGCTAACTT CATGTACTTG AAAGACTATG 1800

TCAAGGAGTT TGACTACTAT TCACCAGTTA TCATCGCAAA CAACGACTAT CTGAAAGATA 1860

ACAAAGAAGA AGCTCGCAAA GTCATCCAAG CCATCAAAAA AGGCTACCAA TATGCCATGG 1920

AACATCCAGA AGAAGCTGCA GATATTCTCA TCAAGAATGC ACCTGAACTC AAGGAAAAAC 1980

GTGACTTTGT CATCGAATCT CAAAAATACT TGTCAAAAGA ATACGCAAGC GACAAGGAAA 2040

AATGGGGTCA ATTTGACGCA GCTCGCTGGA ATGCTTTCTA CAAATGGGAT AAAGAAAATG 2100

GTATCCTTAA AGAAGACTTG ACAGACAAAG GCTTCACCAA CGAATTTGTG AAATAATGAC 2160

AGAAATTAGA CTAGAGCACG TCAGTTATGC CTATGGTCAG GAGAGGATTT TAGAGGATAT 2220

CAACCTACAG GTGACTTCAG GCGAAGTGGT TTCCATCCTA GGCCCAAGTG GTGTTGGAAA 2280

GACCACCCTC TTTAATCTAA TCGCTGGGAT TTTAGAAGTT CAGTCAGGGA GAATTGTCCT 2340

TGATGGTGAA GAAAATCCCA AGGGGCGCGT GAGTTATATG TTGCAAAAGG ATCTGCTCTT 2400

GGAGCACAAG ACGGTGCTTG GAAATATCAT TCTGCCCCTC TTGATTCAAA AGGTGGATAA 2460

GGCAGAAGCT ATTTCCCGAG CGGATAAAAT TCTTGCGACC TTCCAGCTGA CAGCTGTAAG 2520

AGACAAGTAT CCTCATGAAC TTAGCGGTGG GATGCGCCAG CGTGTAGCCT TACTCCGGAC 2580

CTACCTTTTT GGGCACAAGC TCTTTCTCTT AGATGAGGCC TTTAGCGCCT TGGATGAGAT 2640

GACAAAGATG GAACTCCACG CTTGGTATCT TGAGATTCAC AAGCAGTTGC AGCTAACAAC 2700

CCTGATCATC ACGCATAGTA TTGAGGAGGC CCTCAATCTC AGCGACCGTA TCTATATCTT 2760

GAAAAATCGC CCTGGGCAGA TTGTTTCAGA AATTAAACTA GATTGGTCTG AAGATGAGGA 2820

CAAGGAAGTC CAAAAGATTG CCTACAAACG TCAAATTTTG GCGGAATTAG GCTTAGATAA 2880

860

GTAGAAAAAT AGGGAGTTGG TGAAGATTAT CCTTTACCAG CGCCCTTTTT CTTTTAAAAA 2940

TGAGAAAATT TCGGTATAAT AGTCAAACAA GGTCAAGGTT TAAAGAGAGA GGTGGGTTTG 3000

TTATGAGATT TAAAAATACA TCGGATCATA TTGAGGCCTA CATCAAGGCG ATTTTAGATC 3060

AATCTGGTAT CGTGGAGTTG CAACGGAGTC AGTTGGCAGA TACCTTTCAG GTTGTTCCTA 3120

GTCAGATTAA CTACGTGATC AAGACACGCT TTACGGAAAG TAGAGGCTAC TTGGTTGAAA 3180

GTAAGCGTGG TGGCGGAGGC TACATTCGTA TAGGACGGAT TGAGTTTTCT AGTCATCATG 3240

AAATGCTCCG GGAGCTGCTT TACTCGATTG GTGAGCGAGT CAGTCAAGAA ATTTATGAGG 3300

ATATTCTCCA GCTTTTGGTT GAGCAGGAAT TGATGACCAA GCAGGAGATG AATTTGCTAG 3360

AATCAGTAGC TTTGGATCGC GTTTTAGGAG AAGAAGCTCC AGTTGTTCGA GCAAACATGC 3420

TACGTCAGAT CATACAAGAG GTAGATAGAA AAGGGAAGTA AGATGAACTA TTCAAAAGCA 3480

TTGAATGAAT GTATCGAAAG TGCCTACATG GTTGCTGGAC ATTTTGGAGC TCGTTATCTA 3540

GAGTCGTGGC ACTTGTTGAT TGCCATGTCT AATCACAGTT ATAGTGTAGC AGGGGCAACT 3600

TTAAATGATT ATCCGTATGA GATGGACCGT TTAGAAGAGG TGGCTTTGGA ACTGACTGAA 3660

ACGGACTATA GCCAGGATGA AACCTTTACG GAATTGCCGT TCTCCCGTCG TTTGCAGGTT 3720

CTTTTTGATG AAGCAGAGTA TGTAGCGTCA GTGGTCCATG CTAAGGTACT AGGGACAGAG 3780

CACGTCCTCT ATGCGATTTT GCATGATAGC AATGCCTTGG CGACTCGTAT CTTGGAGAGG 3840

GCTGGTTTTT CTTATGAAGA CAAGAAAGAT CAGGTCAAGA TTGCTGCTCT TCGTCGAAAT 3900

TTAGAAGAAC GGGCAGGCTG GACTCGTGAA GATCTCAAGG CTTTACGCCA ACGCCATCGT 3960

ACAGTAGCTG ACAAGCAAAA TTCTATGGCC AATATGATGG GCATGCCGCA GACTCCTAGT 4020

GGTGGTCTCG AGGATTATAC GCATGATTTG ACAGAGCAAG CGCGTTCTGG CAAGTTAGAA 4080

CCAGTCATCG GTCGGGACAA GGAAATCTCA CGTATGATTC AAATCTTGAG CCGGAAGACT 4140

AAGAACAACC CTGTCTTGGT TGGGGATGCT GGTGTCGGGA AAACAGCTCT GGCGCTTGGT 4200

CTTGCCCAGC GTATTGCTAG TGGTGACGTG CCTGCGGAAA TGGCTAAGAT GCGCGTGTTA 4260

GAACTTGATT TGATGAATGT CGTTGCAGGG ACACGCTTCC GTGGTGACTT TGAAGAACGC 4320

ATGAATAATA TCATCAAGGA TATTGAAGAA GATGGCCAAG TCATCCTCTT TATCGATGAA 4380

CTCCACACCA TCATGGGTTC TGGTAGCGGG ATTGATTCGA CTCTGGATGC GGCCAATATC 4440

TTGAAACCAG CCTTGGCGCG TGGAACTTTG AGAACGGTTG GTGCCACTAC TCAGGAAGAA 4500

TATCAAAAAC ATATCGAAAA AGATGCGGCA CTTTCTCGTC GTTTCGCTAA AGTGACGATT 4560

GAAGAACCAA GTGTGGCAGA TAGTATGACT ATTTTACAAG GTTTGAAGGC GACTTATGAG 4620

AAACATCACC GTGTACAAAT CACAGATGAA GCGGTTGAAA CAGCGGTTAA GATGGCTCAT 4680

CGTTATTTAA CCAGTCGTCA CTTGCCAGAC TCTGCTATCG ATCTCTTGGA TGAGGCGGCA 4740

GCAACAGTGC AAAATAAGGC AAAGCATGTA AAAGCAGACG ATTCAGATTT GAGTCCAGCT 4800

GACAAGGCCC TGATGGATGG CAAGTGGAAA CAGGCAGCCC AGCTAATCGC AAAAGAAGAG 4860

GAAGTACCTG TCTACAAAGA CTTGGTGACA GAGTCTGATA TTTTGACCAC CTTGAGTCGC 4920

TTGTCAGGAA TCCCAGTTCA AAAACTGACT CAAACGGATG CTAAGAAGTA TTTAAATCTT 4980

GAAGCAGAAC TCCATAAACG GGTTATCGGT CAAGATCAAG CTGTTTCAAG CATTAGCCGT 5040

GCCATTCGCC GCAACCAGTC AGGGATTCGC AGTCATAAGC GTCCGATTGG TTCCTTTATG 5100

TTCCTAGGGC CTACAGGTGT CGGGAAAACT GAATTAGCCA AGGCTCTGGC AGAAGTTCTT 5160

TTTGACGACG AATCAGCCCT TATCCGCTTT GATATGAGTG AGTATATGGA GAAATTTGCA 5220

GCTAGTCGTC TCAACGGAGC TCCTCCAGGC TATGTAGGAT ATGAAGAAGG TGGGGAGTTG 5280

ACAGAGAAGG TTCGCAATAA ACCCTATTCC GTTCTCCTCT TTGATGAGGT AGAGAAGGCC 5340

CACCCAGATA TCTTTAATGT TCTCTTGCAG GTTCTGGATG ACGGTGTCTT GACAGATAGC 5400

AAGGGACGCA AGGTCGATTT TTCAAATACC ATTATCATTA TGACATCGAA TCTAGGTGCG 5460

ACTGCCCTTC GTGATGATAA GACTGTTGGT TTTGGGGCTA AGGATATTCG TTTTGACCAG 5520

GAAAATATGG AAAAACGCAT GTTTGAAGAA CTGAAAAAAG CTTATAGACC GGAATTCATC 5580

AACCGTATTG ATGAGAAGGT GGTCTTCCAT AGCCTATCTA GTGATCATAT GCAGGAAGTG 5640

GTGAAGATTA TGGTCAAGCC TTTAGTGGCA AGTTTGACTG AAAAAGGCAT TGACTTGAAA 5700

TTACAAGCTT CAGCTCTGAA ATTGTTAGCA AATCAAGGAT ATGACCCAGA GATGGGAGCT 5760

CGCCCACTTC GCAGAACCCT GCAAACAGAA GTGGAGGACA AGTTGGCAGA ACTTCTTCTC 5820

AAGGGAGATT TAGTGGCAGG CAGCACACTT AAGATTGGTG TCAAAGCAGG CCAGTTAAAA 5880

TTTGATATTG CATAAAAGAA TAAAAGTATC AGCATCTGAC CATAAGTCAC AGTGGAGTGA 5940

AATTCAATGA AAATCAAAGA GCAAACTAGG CAGCTAGCCG CAGGTTGCTC AAAACACTGG 6000

TTTGAGGTTG CAGATAGAGC TGACGTGGTT TGAAGAGATT TTCGAAGAGT ATGAAACTAA 6060

AACCTATAGC TTCTAAACGA TCCGTGGTTT TCATCATTCA ACACAAAATT CATATGTTTA 6120

TTACCCTCCG TCGTATTTGT CTTAGAGCGT GTGTAGTAGA AAAAGAGCAG TCTTATCTGA 6180

AATTTTTATT CTTTCAAAAG AGACCTGTTT CTTTTTTGCA TGTCAAATCC GTTCTAGCTG 6240

GTATTTGAAA AATCAAACTA ATATTCAATG AAAATCAAAG AACAAACTAG GAAGCTAGCC 6300

GCAGGTTGCT CAAAACACTG TTTTGAGGTT GTAGATAGAG CTGACGTGGT TTGAAGAGAT 6360

TTTCGAAGAG TATAAGCTGC AAGATGAATG ATTTTCTTGT ATTGACGTTG TTGTTGACAA 6420

AAAGTAGCGG ATAAATGAAA TCCATTCCAT TATCATAGAT GATAGGCTGG TAGGAAATTT 6480

TCAAATAGCA TACAGGAAAT AGATGTATGG AGTTCTGGTA GTAGAAAGGG AGAGAGATGA 6540

ACATTTTAGT TGCAGATGAC GAGGAAATGA TTAGAGAAGG AATTGCAGCA TTTCTGACAG 6600

AAGAGGGTTA TCATGTCATT ATGGCTAAGG ATGGACAAGA GGTCTTGGAA AAATTTCAAG 6660

ATCTCCCTAT CCATCTCATG GTACTGGATT TAATGATGCC TAGGAAGAGT GGTTTTGAAG 6720

TGTTAAAAGA AATCAATCAA AAGCACGATA TTCCTGTCAT CGTCTTGAGT GCTCTGGGAG 6780

ATGAAACTAC TCAGTCACAG GTATTTGATC TCTATGCTGA TGATCATGTG ACAAAACCTT 6840

TTTCTTTGGT ACTGCTTGTC AAGCGTATTA AGGCGCTTAT CAGACGTTAC TACGTCATAG 6900

AGGATCTTTG GCGATATCAG GATGTAACAG TGGATTTTAC CTCTTACAAA GCACATTATA 6960

AAAATGAAGA AATTGATCTC AAACCAAAGG AATTACTGGT ACTAAAGTGT TTGATTCAGC 7020

ATAAAAATCA AGTTTTAAGT AGAGAGCAGA TATTGGAAGA AATTTCAAAA GATGTAGCTG 7080

ATTTACCTTG TGATAGGGTC GTTGATGTCT ATATTCGTAC TCTTCGCAAA AAATTAGCTT 7140

TAGATTGTAT CGTGACTGTG AAAAATGTTG GGTATAAGAT TAGCTTATGA TAAAAAATCC 7200

TAAATTATTA ACCAAGTCTT TTTTAAGAAG TTTTGCAATT CTAGGTGGTG TTGGTCTAGT 7260

CATTCATATA GCTATTTATT TGACCTTTCC TTTTTATTAT ATTCAACTGG AGGGGGAAAA 7320

GTTTAATGAG AGCGCAAGAG TGTTTACGGA GTATTTAAAG ACTAAGACAT CTGATGAAAT 7380

TCCAAGCTTA CTCCAGTCTT ATTCAAAGTC CTTGACCATA TCTGCTCACC TTAAAAGAGA 7440

TATTGTAGAT AAGCGGCTCC CTCTTGTGCA TGACTTGGAT ATTAAAGATG GAAAGCTATC 7500

AAATTATATC GTGATGTTAG ATATGTCTGT TAGTACAGCA GATGGTAAAC AGGTAACCGT 7560

GCAATTTGTT CACGGGGTGG ATGTCTACAA AGAAGCAAAG AATATTTTGC TTTTGTATCT 7620

CCCATATACA TTTTTGGTTA CAATTGCTTT TTCCTTTGTT TTTTCTTATT TTTATACTAA 7680

ACGCTTGCTC AATCCTCTTT TTTACATTTC AGAAGTGACT AGTAAAATGC AAGATTTGGA 7740

TGACAATATT CGTTTTGATG AAAGTAGGAA AGATGAAGTT GGTGAAGTTG GAAAACAGAT 7800

TAATGGTATG TATGAGCACT TGTTGAAGGT TATTTATGAG TTGGAAAGTC GTAATGAGCA 7860

AATTGTAAAA TTGCAAAATC AAAAGGTTTC CTTTGTCCGC GGAGCATCAC ATGAGTTGAA 7920

AACCCCTTTA GCCAGTCTTA GAATTATCCT AGAGAATATG CAGCATAATA TTGGAGATTA 7980

CAAAGATCAT CCAAAATATA TTGCAAAGAG TATAAATAAG ATTGACCAGA TGAGCCACTT 8040

ATTAGAAGAA GTACTGGAGT CTTCTAAATT CCAAGAGTGG ACAGAGTGTC GTGAGACCTT 8100

GACTGTTAAG CCAGTTTTAG TAGATATTTT ATCACGTTAT CAAGAATTAG CTCATTCAAT 8160

AGGTGTTACA ATTGAAAATC AATTGACAGA TGCTACCAGG GTCGTCATGA GTCTTAGGGC 8220

ATTGGATAAG GTTTTGACAA ACCTGATTAG TAATGCAATT AAATATTCAG ATAAAAATGG 8280

GCGTGTAATC ATATCCGAGC AAGATGGCTA TCTCTCTATC AAAAATACAT GTGCGCCTCT 8340

AAGTGACCAA GAACTAGAAC ATTTATTTGA TATATTCTAT CATTCTCAAA TCGTGACAGA 8400

TAAGGATGAA AGTTCCGGTT TGGGTCTTTA CATTGTGAAT AATATTTTAG AAAGCTATCA 8460

AATGGATTAT AGTTTTCTCC CTTATGAACA CGGTATGGAA TTTAAGATTA GCTTGTAGAC 8520

AGATTAGTTT TTTATTAAAG TTCATATAGG GTTAACATAA GTGTGTTATT CTTTGTGTAG 8580

ATAAAAGAAA GGATACTAAT ATGGTATTAG CGATTATTTT AGTAACATTC TTTATTCGAT 8640

TGATTTTTTT AAAGCGTTCG ATAGAGAATG AGAAACGAAT CCTTAGCAAT GGCGGGG 8697

(2) INFORMATION FOR SEQ ID NO: 124:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 4317 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 124:

AACCATACAT ACGGCAAGGC AAAGCTGACG CGGTTTGAAG AGATTTTCGA AGAGTATTAG 60

TTGCCTTTAA AGGCATCCAC CATCGTTTGA AATTCTTCAT TTGAGAGAGT AATCCCTTTG 120

CCCATTTTAG TATGGTCTGG ACTCCAAGCA CGAATATCAA ACTTTGCAGG GGCACCATTA 180

AAGCTCACAC GGTTAATTTC CTTGGTCCAA CCTTTTTCGT TTTCAGAAAG AGTCAACAAG 240

TGCTCTTCGA TTTCAAATGT AAATTCTGCC ATTTTCTTCT CCTTTTTTAG TTTCATTAGT 300

TTATTCGTAA AATCTTGTAG ATTTTAGGAA AATTTTATAT AATATTGATA TAAAAGAAGG 360

GAGGCCAATA TGAGACATAA ATTCCAGCAA GTTCTAAATA AAATACATGA TTTTTTAAAT 420

GGATATGACC AACCTGACCA GACTGAAACC AACTCCCTTA CAGCCACTAT TGAAGAGGCT 480

ATCCAGAAAC AAACCGCTGT TCACCTTATC TTGTCTGAGA CAAGCTTTAC AGGTGACATC 540

ATCAAATATG ATCAGCAAGG CCAGCAAATT ATCGTGAAAA ATTTTTCCAA AAATGTGAGC 600

CGGATTATCC GTATAAGCGA TATTCAACGC CTGCGATTTG TCCCCTCAAC TGTCCAAACA 660

GCCCAAAAAA ATAGATTTAA GAAAGAGTGA GATGTAGTTG CTTCATCCCA CTCTTTTTTC 720

TTAGCGAATT TGTTCAAAAT GTAAATGAAC TGCGATATGA TCTCCATAAC CACTTCTTTC 780

CAAGTCACGT TGTAAACGAT AGGAAATGTA GTGTTCTGCA ATGGTAATGT AACCTGCGCC 840

CAATAAACGA TGTTCAACCA TAGATTGAAT CATACTGATA GTCGCACGTT CCACCTTGGC 900

TTCTTGTAAA TCCAAAACTA CCTTCTTAGT GACTTGAGCA AGATTTTGAC GCAAATCATC 960

TGTCAAAACA TAAACAGTTT GGGCTGCCTT CAAGATGGCT TGGTAAATCT TATCTGGATT 1020

AAATTCAGCA ATTTCGCCAT TACGTTTGAT TACTTGCATA GGTTTCTCCT TTATTCTTTG 1080

TTTTCTTTGA TTTCTGCCAG CATTTTTTCT TCTTCTACTG TCAGTTGATA ATGTTCAAGT 1140

AAATCCGGTC TGCGCTCGTA GGTTTTCTTT AAACTCTCGT ACAATCGCCA CTGACGAATC 1200

TTTTCATGGT GGCCACTCAT CAATACATCT GGCACGACCA TGCCTCGATA ATCATAGGGA 1260

CGTGTGTACT GAGGATATTC TAAAAGACCT GAAGAAAAAC TATCATCTTG GTGGCTAGAC 1320

TCCTTGCCAA TCACTTCTGG AATCAGGCGA ACTGTAGCAT CAATCATGGT CATAGCTGCC 1380

AATTCTCCAC CAGTGAGGAC ATAGTCACCT AGGGAAATCT CATCTGTTAC CAAGGTCTTA 1440

ATGCGCTCAT CATAACCCTC ATAGTGCCCA CAGATAAAGA TTAGCTCTTC CTCTTGAGCC 1500

AAATCTTCAG CATAAGCCTG ATCAAACTGC TTTCCAGCAG GATCAAGGAG AATAACGCGC 1560

GGATTTTTCT TTTCAATAGC ATCAAAGGAA TCGAAAATAG GTTGTGCTCT GAGCAACATG 1620

CCCTGACCGC CTCCGTAGGG CTCATCATCT ACATGACGGG CCTTTTCAGC ATTTTCTCGA 1680

AAATTATGAT ACTGGATATC CAAGAGCCCT TTTTCTCGAG CCTTTCCAAC GATTGAGTGC 1740

TCCAGTGGAG AAAACATCTC TGGAAAGAGG GTTAAAATAT CAATCTTCAT CGTCTAACCC 1800

TTCTAAGATT TCCACATCGA CCCGTTTACT TGGAATATCA ACATTGAGAA CCACTGGTGG 1860

GATATAAGGT AAAAGCAAAT CACGTTTGCC TTTTCGTTTG ACCACCCAGA CATCATTAGC 1920

ACCTGGTTGC AGGATTTCCT TGATGGTTCC AACCAAGCTA TCACCCTCAT AGACTTCCAA 1980

ACCGATAATC TCGTGATAGT AAAATTCACC ATCGTCTAGG TCATTCAAAT CTTCCTCAGC 2040

GACCTTGAGA CTGTATCCCT TGTACTTTTC GATAGTATTG ATATGGTACA TATCTTTGAA 2100

TTTAATAATG TCAAAGTTCT TCTGTTTACG GTGGCTAGCG ATGGTCACTG TTTGGACAAA 2160

CTGATCTTTT TCATCAAACA AAACCAGCTC AGCTCCTTTT TTAAACCGTT CTTCTGCAAA 2220

ATCCGTCACA GACAAGACTC GCATCTCCCC CTGTAATCCC TGCGTATTAA CGATTTTCCC 2280

AACATTAAAG TAGTTCATCT TGTCTCCTGT AATCTCCTTT TTTCCATCTT ATTCTAACAA 2340

TTCTCGAATA ATAGCCGCAA TTTTTTCCGA TTCTGACCAT TGTAAATAAT GGTGATTCCC 2400

TCCTAAAATG AGTTTAGTAT TGGAAGTCCA ATATTCTGAT TCTCTGTACT CTTTTTCTCT 2460

ATAAGGCTGA CAAAAAACAA ATACAGGAAT ATGAGCTTCT ATAGATACAT CCTCAAAATC 2520

TTCCTCAGTA ATCTCTCCAG ATATCTGAAA TTCTGGATCT TGATTTTCCA ACTCTAAGCC 2580

TTTTTCTTGC ATTAATTCCC AGATTTTTTT ATTCGTTTCA GGACTAAATG TTGCTTGAGT 2640

TAAGTTCTTA AAATAAAGTT CAGGACCACA CTCGTCAATC AGCCTCATCT GCTCTTCCAT 2700

TTCTGGATAA GGATTTTCTG AAAAATCAGC AAACATGACT TTTTTAGTTG TCGGTTCAAT 2760

TGCTACTAAA GTCTGACGCT TAATTGGTTT CTCGAGTAAT TTGCAAGCTA AAATTCCACT 2820

CCAACTATGT GCACAAAGTA TATATTCAGA AATTCCTAAT TCTTCAAGTA CTTCATAAAC 2880

CGCATCTGCA AGATTATCTA GATTTTTTCC AGCTTGGTCA TGAATCGGAC TCCTACCTGT 2940

GTTCGGAAAA TCAATTGTCA AATAACCAAT TGTAGGAGGA GGTTTTTCAA GTATAAGTGA 3000

AAAATTTTCA TAACTTGGTA GCAAACCTGC TCCGTTTAAA CAAACTAGCA CTTTCTTTTG 3060

CTTTTGATAA GTAACAGAGA GGCTACCAAT TTCTGTAGAT ACTTCAAACC TCTTCATAAA 3120

GAAATCCACT GATTCTATAT AATGAATTAT TAAAAATCCT TATCCTTTAT TTTATCACGT 3180

TCCAAGGATT TTCTCAAGTT GGAGGAAGGG GACAATATCT CTACTTTCCC TTCAATAATC 3240

CTTCCAAATT ATGTTTATGT TGGTAATTAA TGGCTGCGGT TTTGTCTTTC TCAAAGACAG 3300

TCTTGGTAAG GTCAATATGA TTAATAGCTA CGATTGCGAC GGTGTAGTAA ATGATATCAG 3360

CCAGTTCTCT GGCAAGTTCC TCGTTCGAAT CCTATCCCTT CTTTTCGACC AGAGCGCCTA 3420

TTCAAAACCT CGACTACTTC TCCGACTTCC TCCACTAACT TCATAAAGAG ACCTTCATCA 3480

GTCCGAGACT GCTGTTAATG TTCGATTAAG TAGTCTTGGA ATTGCCTAAA CGTTCAATCT 3540

TTTATAGTAT ATTGAAACTA GAATAGTACA CCTTTACTTC TAAAACATTG TTAGAAATCG 3600

ATTTGACTGT CCTGATCGAT TTGTCCTGTT CTTGTTTCAT TTTACTATAT CTTCTATTCC 3660

ACACAAAAAA GCGAGACATC CGTCCCGCCC TTCTTATTTT TCGTCAATAA CGATTCTTAC 3720

TTTTTTGTAT TCAGTTGGGA CAGAGTAGAC AATCGTTCTT ATCGCAGAAA TAGTGCGACC 3780

CTTACGACCG ATTACACGAC CCACATCGCT TTGATCAAGA TTCAAATGAT ATTCCAAAAA 3840

TTCTGGTGTA TCCTCAATCT TGATAGTTAA GGCATCTGGT TGTGAAATTA AGGGTTTCAC 3900

AATCGCAATA ATGAGATTTT CAATCGTATC CATCTGTCAA CCTACTTTAA ACTTATTTTG 3960

AAAATTTAGA ATCGTGGAAT TTTTTCAATA CGCCTTCTTT TGAAAGGATG TTACGTACTG 4020

TGTCTGAAGG TTGAGCTCCA TTAGCCAACC ATGCAAGAAC GCGGTCTTCT TTCAAAGTTA 4080

CTTGGTTTTC AGCAACAAGT GGGTTGTAAG TTCCAACTGT TTCGATGAAA CGTCCGTCAC 4140

GTGGTGAACG TGAATCTGCT ACGTTGATAC GGTAGAAAGG TTTTTTCTTA GAACCCATAC 4200

GAGTCAAACG GATTTTAACT GCCATTTTTA AAGTCTCATT TCTTTAATTT TTTATTTCGG 4260

TGAAATAGCT GAGCTATTTA GCACATGTTC TATTATAGCA GATTTCTGGC ATGTGTC 4317

(2) INFORMATION FOR SEQ ID NO: 125:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 4881 base pairs

(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 125:

AATTTATTTG ACTGGAAATT GTAGAGGGTT CTCGAAATTT CTTGAATGGT TAAAATAAGG 60

ACAAGAGAAA ACATGGATAT CTATATCCTT GTGCCAAAAA AACCACTGCC CTCCCCAGAC 120

CAACCTGAGG AAAGCAGTGA TTCTTATTTT AGGAGTTAGG AATGAATACA CGAAATCAAT 180

TTAGCTGATT ATTTTTTGTT TTTCAAGAAT TCATCGTATT GTTTTTGCAT TTCGTTCAAT 240

ACTTTTTCGT AGGCACCTTC AGATTTCAAT TTTTCCATCA ATTCTGGAAT CGCTTTATCT 300

GGGTCTACAG TACCAGTGTT GATAGCTGTA TCAAATTGTT GCATTGTGTT AGCAATAGCT 360

GAGATTTCAG ATTTCACATT GTCAGTATTG AAGATAAATC CAAGCGCTGG AGATTCTTTA 420

GCTTCTGCCA ATTCTTTCTT AGAATTTTCG ATTTGTTGGT CTGTAACGTT TTCGTTGATG 480

TAAAGGATCC AGTTGTTACC AGTGTTCCAT CCACCCATGT GAGTGTTTCC TTTGTAGCCA 540

TCAAGAACGC GAACACGGTT TTCTTTACCT TCAATTTTTT CCCAGTTCTT GCCTTCTGGA 600

CCGTAAACAA GACCGTTCAA GAGTTCTGGG TTCGTATTCA AGAGGTTCAA GATTTCCATT 660

GATTTTTCTT TGTTCTTAGA GTTGTTTGAG ATGACAAAGT TAGCAACTTG TGTTGTTTGG 720

TTTTTCTTGA TGAAGTTAGT AATTGGTTTG ATTTGGATAT CTTTGTTGGC AACACGTGAA 780

AGCAAGCTGT TACCGTAGTC AGCTGGTCCT ACTGTTTCTT CACGAACGAA CCAAGTATCT 840

TGTTGAAGGT CAAAGGAAGT ATCGCTTGTT GCGACGTCTT TTGGAATGTA GCCAGCTTCA 900

TAGAATTTGT GAAGAGTCTT CAAGTGTTCT TTGAAACGAG GCACTTCGTA ACGGTTTACA 960

ACTTTAGTAG TATCGCCTTC AAGGTCGATA ACGAATGGAA GACCGTTTGC TACTGGGTAG 1020

TCAAAATTAT CAGATGGGAT GAAAACTTTA CCAATAGCAA ATGGTACTAC GTCTGGAGCT 1080

TTTTCTTTGA TTTGTTTCAA GACTGGCTCA AGAGTTTCGT AAGAAGTAAC ACCTGAAATA 1140

TCGATACCAT ATTTAGCAAG GAGAGTTCCG TTGAAGGCAA AGTTTTGAGA TGATGCAACG 1200

TTGGCTGCAA CTGGAACAGC GTAAATCTTA CCATTTACAG TATTACCCTT GATGTAAGCT 1260

GGGTCAAGTG CTTTGTAAAG GTCTTTACCT TCTTTTTTGT ACAATTCTGT CAAGTCAGCG 1320

TAAGCACCTT TTTGAGCATT TACAATATAG TTATCTGCAA AGGCAATATC ATAGTTTTCA 1380

CCAGATGATG TGATAACTGA CATTTTCTTA CCATAGTCAC CCCAGCCAAG GTATTGGATA 1440

TCCAATTTGG CACCAACTTT TTCTTCAATG ATTTTGTTGG CATTTGCTAA CAATTCATCC 1500

AAGTTGTCTG GTTTGTCACC GATTTGGTAC ATTTTGATAA CAGGTTTGTC ACCTGAATCA 1560

GCAGCTTTTT TGCTGTTACC TGTCAAATTT CCACAAGCAG CAAGACCTGC AGCCAGAGCG 1620

ACTACACTAG CAGATGCAAA AGCATATTTT TTCCAGTTTT TCATGATAAA AACTCCTTTT 1680

TTTATTTTTA AACTTATAAA CAATGTAATG ATCTTATACT CAATAAAAAT CAAAGAGCAA 1740

ACTAGAAAAC TAGCCGCAGG CTGCTCAAAG CACTGCTTTG AGGTTGTAGA TAAGACTGAC 1800

GAAGTCAGTT ACATATATCT ACGGCAAGGC GACGTTGACG CGGTTTGAAT TTGATTTTCG 1860

AAGAGTATTA ACTTCACACA AGGGAAGTTG GGAACTGAGA AATGTTATTT CTCAATAAGC 1920

ACTATTCTTT CACACCACCG ATAGTCAAAC CTTTTACAAA GTAGCGTTGG AAAAATGGAT 1980

ACAAAATCGC GATTGGAAGG GTTGCAACCA CAACCATGGC CATACGACCT GTTTCTTTCG 2040

GTAGAGCAAC TCCCAGTTGA CCAATCAAGC CGACCGCTTT GGCAATGTAG TCCATATTTT 2100

GTTGGATTTG CATGAGCAAA TATTGCAATG GATACAAGTT GTCACTCTTG ATGTAAAGAA 2160

GGGCGTTGAA CCAGTCATTC CAGAAACCAA GAGCTGTTAA GAGCGTGATG GTTGCGATAC 2220

CTGGTAGTGA CAATGGCAAA CAGATTTGGA AGAAAATCCG GGCCTCACTG GCACCATCGA 2280

TACGAGCCGA TTCTAGAATG GCTTCTGGAA TGGTCTTCTT GAAGAAGGAA CGCATCAAGA 2340

TGATGTTAAA TGGTGAGAGA AGCATTGGAA CAATCAAGGC CCAAACAGTG TCACCAAGCT 2400

GAAGTACACG GGTCACCATG ATATAACCTG GTACCAAACC AGCGTTGAAC AACATACTGA 2460

GAAGGACGAA GATGGTAAAG AATCTGCGAT ACTTAAAGGT TGTCCGTGAA ATAGCGTAGG 2520

CATAGGTTGT TGTGATAAAG ACATTTGTCA ATGTCCCAAC TACGGTTACA AAGACAGAGA 2580

TGAAGAGGGC TTGTAGGATT TTATCCTTAA ACTGTGCCAA AAACTCAAAA CCGTCTAAGC 2640

CAAATTGGGA TGGGAAGAAG CTATAGCCGT ATTGGAGGAG GCTTTTCTCG TCTGTCACTG 2700

AAATAATGAT AACGAATACA AAAGGTAGGA TACAAGAGAG GGCAATCAAA CCCGAAATGA 2760

TACTGAAGAA GATATCTGCT TTCTTACTGA AGGAGTGAAT GCCGACATTA TCAATTTTTT 2820

CTTTTTTAAT TTTCTTTTTT GCCATATTCT CCTCCTTTCT AGAACAAAGC TGAGTTTGGA 2880

TCGACTCGTC TTGCAAGCAA GTTTGATAGG ATAACCAGAA TCAAACCAAC AACGGATTGG 2940

TAAAGACCGG CTGCTGCAGC CATACCGATA TCTGCTGTCT GAGTCAAACC ATTAAAGACA 3000

TATACGTCCA AAACGTTGGT TACATTGTAA AGCTGACCAG CATTGTGTGG GATTTGATAG 3060

AAGAGACCGA AGTCTGCGCG GAAGATATTT CCGACTGCAA GGATGGTCAA TACAGTTACA 3120

AGCGGAGTCA ACTGAGGAAT GGTTACGTTG CGAATACGTT GCCACTTGCT AGCTCCGTCC 3180

ACTGTCGCTG CTTCGTAGTA GGTTGGATCA ATTCCCATGA TCGTCGCATA GTACATGACA 3240

CTGCTATATC CAAAGCCTTT CCAAATACCT AGGAAAAGTA GGAGATAGGG CCAGATGCCC 3300

AGGTCAGCGT AGAAATTGAC TTCTTTGAGA CCAAGACTTT CCAATAGATG ATTGAACACC 3360

CCTTTATCAA TATTTAGGAA GGCATCTGTA AAGAAACTGA TGATAACCCA AGACAAGAAG 3420

TAAGGGAACA ACATAGAAGT TTGAAAAATC TTCACCATTC TCTTAGAACG GAGCTCGCTG 3480

AGGATAATGG CAATCCCTAC AGATACAACT AAACCTAGAA AGATAAAGCC AAGATTGTAG 3540

AGGACAGTAT TTCGTGTGAT AATAAAGGCG TCTCTTGAAC TAAATAAGAA TCTAAAATTA 3600

TCGAGTCCGA CCCATTTACT ATTTATGATA CTATCTATGA AACCATTACT GGTCATGTGG 3660

TAGTCTTTGA AGGCAACCAC GTTCCCAAAT ACTGGAATGT AAAAGAATAG AATCAACCAG 3720

AGTGCCCCTG GCAAAACCAT CAAGAGAAAG ATCCAGTTGT CTCTCAATGT TTTTGAAAAC 3780

TTTTTCATAA TTTCCTCCCT TTTTATTTTG ATATCCATCT AAAAATTCTT TTTTAGACTT 3840

TTGATAACGA TTACATTATT AGTATACTCC TATTTGCAGG TTAGGTTAAA CTCCTAATTA 3900

TAGAAAAAAC TCCACAAATT ATGTAGCAGA TTTAAAACTT TATCACCACT ATCAAACAAA 3960

TGTCCTAAAT CAATTGTTTA TTTTATCTCT ATTAGCCCAG TGATGGCGTC ACTCTGTTAT 4020

AAGCATCCAA CAACGGGGTA TACTGAAAAA TCTCCAGACT AGGGAACTCA GCGATAGTTC 4080

CTAATCTGGA GATTTTTAAT ATGTTATTAG GCGTTTGCTT TCAACTTAGC AATAACCTCT 4140

TTAAGATTAT CAATCAACTC TGCTGCAGTA TGCTCAGAGC CTTTTTCATC TGCCAAGAAC 4200

AAAACTGCTT TTTGAAGTTC TTTTTGAGAG TTTTCAAGGA CATCCTTATC TACTGTTTCA 4260

AGGTTTGAGT CTTTAAGAAG TTTACTTAAT TCCTTGGCTA ATTTCTTGAG TTTGATTTGC 4320

AGACTCATCT TCTCCTGCTG TTTCTTTGCC CGCTGTTTGT CCTCCATCCT TAGTTGCTGA 4380

CTGGCTTTCC TTAATGGACT CTAGGGAAGC AATGGCATCT TTGACTGTTT GCAAGATATC 4440

ACGTAAACCT TGCTCTGTCA AACTATCATC TGCAAAAGCT TTATTAGCCT CTGCCAAAAC 4500

CAGACGTGCT GAATCTGTGG TAGGATTCGA TACACCTGTC AATGATCTCA AAAGATTTTC 4560

TAAGGTTTGA GTCTGCTTAC TAATACTAGA CTAAAATCAA AAAGTATTAT ATAACAGTGA 4620

TATGAAATCA ACTAAAGAAG AAATCCAAAC CATCAAAACA CTTTTAAAAG ACTCTCGTAC 4680

AGCTAAATAT CATAAACGCC TTCAAATCGT TCTATTTTGT CTGATGGGCA AATCTTATAA 4740

AGAGATTATA GAACTTTTAT AGTAGTTTGA AATAAGATGT GAACATCTCT ATCAGGAAAG 4800

TCAAATTAAT TTATAGAAAT ATTTTAGCAG CCAAGGTGTA CTGTTATAGA TTCAATACAC 4860

TATACTTGGT GGTTTAGCTC G 4881

(2) INFORMATION FOR SEQ ID NO: 126:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 13121 base pairs
(B) TYPE: nucleic acid

(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 126:

AGGATCCCCG GAAAAGGAGA CTAAAAATGA AGAAAAAATT TCTAGCATTT TTGCTAATTT 60

TATTCCCAAT TTTCTCATTA GGTATTGCCA AAGCAGAAAC GATTAAGATT GTTTCTGATA 120

CCGCCTATGC ACCTTTTGAG TTTAAAGATT CAGATCAAAC TTATAAAGGA ATTGATGTTG 180

ACATTATTAA CAAAGTCGCT GAGATTAAAG GCTGGAACAT TCAGATGTCC TATCCTGGAT 240

TTGACGCAGC AGTCAATGCG GTTCAAGCTG GGCAAGCCGA CGCTATCATG GCAGGGATGA 300

CAAAGACTAA AGAACGTGAA AAAGTCTTCA CCATGTCTGA TACTTACTAT GATACAAAAG 360

TTGTCATTGC TACTACAAAG TCACACAAAA TTAGCAAGTA CGACCAATTA ACTGGCAAAA 420

CCGTTGGTGT TAAAAACGGA ACTGCCGCTC AACGTTTCCT TGAAACAATC AAAGATAAAT 480

ACGGCTTTAC TATTAAAACA TTTGACACTG GTGATTTAAT GAACAACAGC TTGAGTGCTG 540

GTGCCATCGA TGCCATGATG GATGACAAAC CTGTTATCGA ATATGCCATT AACCAAGGTC 600

AAGACCTCCA TATTGAAATG GATGGTGAAG CTGTAGGAAG TTTTGCTTTC GGTGTGAAAA 660

AAGGAAGTAA ATACGAGCAC CTGGTTACTG AATTTAACCA AGCCTTGTCT GAAATGAAAA 720

AAGATGGTAG TCTTGATAAA ATTATCAAGA AATGGACTGC TTCATCATCT TCAGCAGTGC 780

CAACTACAAC TACTCTCGCA GGATTAAAAG CTATTCCTGT TAAGGCTAAA TATATCATTG 840

CCAGCGATTC TTCTTTTGCC CCTTTTGTTT TCCAAAATTC AAGCAACCAA TACACTGGTA 900

TTGATATGGA ATTGATTAAG GCAATCGCTA AAGACCAAGG TTTTGAAATT GAAATCACCA 960

ACCCTGGTTT TGATGCTGCT ATCAGTGCTG TCCAAGCTGG TCAAGCCGAT GGTATCATCG 1020

CTGGTATGTC TGTCACAGAT GCTCGTAAGG CAACTTTTGA CTTCTCAGAA TCATACTACA 1080

CTGCTAATAC CATTCTTGGT GTCAAAGAAT CAAGCAATAT TGCTTCTTAT GAAGATCTAA 1140

AAGGAAAGAC AGTCGGTGTT AAAAACGGAA CTGCTTCTCA AACCTTCCTA ACAGAAAATC 1200

AAAGCAAATA CGGCTACAAA ATCAAAACCT TTGCTGATGG TTCTTCAATG TATGACAGTT 1260

TAAACACTGG TGCCATTGAT GCCGTTATGG ATGATGAACC TGTTCTCAAA TATTCTATCA 1320

GCCAAGGTCA AAAATTGAAA ACTCCAATCT CTGGAACTCC AATCGGTGAA ACAGCCTTTG 1380

CCGTTAAAAA AGGAGCAAAT CCAGAACTGA TTGAAATGTT CAACAACGGA CTTGCAAACC 1440

TTAAAGCAAA CGGTGAATTC CAAAAGATTC TTGACAAATA CCTAGCTAGC GAATCTTCAA 1500

CTGCTTCAAC AAGTACTGTT GACGAAACAA CGCTCTGGGG CTTGCTTCAA AACAACTACA 1560

AACAACTCCT TAGCGGTCTT GGTATCACTC TTGCTCTAGC TCTTATCTCA TTTGCTATTG 1620

CCATTGTCAT CGGAATTATC TTCGGTATGT TTAGCGTTAG CCCATACAAA TCTCTTCGCG 1680

TCATCTCTGA GATTTTCGTT GACGTTATTC GTGGTATTCC ATTGATGATT CTTGCAGCCT 1740

TCATCTTCTG GGGAATTCCA AACTTCATCG AGTCTATCAC AGGCCAACAA AGCCCAATTA 1800

ACGACTTTGT AGCTGGAACC ATTGCCCTCT CACTCAATGC GGCTGCTTAT ATCGCTGAAA 1860

TCGTTCGTGG TGGTATTCAG GCCGTTCCAG TTGGCCAAAT GGAAGCCAGC CGAAGCTTGG 1920

GTATCTCTTA TGGAAAAACC ATGCGTAAGA TTATCTTGCC ACAAGCAACT AAATTGATGT 1980

TGCCAAACTT TGTCAACCAA TTCGTTATCG CTCTTAAAGA TACAACTATC GTATCTGCTA 2040

TCGGTTTGGT TGAACTCTTC CAAACTGGTA AGATTATCAT TGCTCGTAAC TACCAAAGTT 2100

TCAAGATGTA TGCAATCCTT GCTATCTTCT ATCTTGTAAT TATCACACTT TTGACTAGAC 2160

TAGCGAAACG CTTAGAAAAG AGGATTCGTT AATGGCAAAA TTAAAAATTG ATGTAAATGA 2220

TTTACACAAG CACTATGGAA AAAATGAAGT CCTAAAAGGA ATTACGACTA AGTTCTATGA 2280

AGGAGATGTT GTTTGTATCA TCGGTCCTTC AGGTTCTGGT AAGTCAACTT TCCTCCGTAG 2340

CCTCAATCTT TTAGAAGAAG TCACTAGCGG TCACATCACT GTGAACGGCT ATGATTTAAC 2400

TGAAAAAACA ACCAATGTTG ACCACGTCCG TGAAAATATC GGCATGGTAT TCCAACACTT 2460

CAACCTCTTC CCTCATATGT CTGTATTGGA CAACATCACC TTTGCTCCTA TTGAGCACAA 2520

GTTGATGACT AAGGAAGAAG CTGAGGAATT GGGAATGGAG TTGCTTGAAA AGGTTGGACT 2580

AGCAGATAAA GCTAATGCCA ATCCAGATAG CCTATCAGGT GGTCAAAAAC AACGTGTGGC 2640

CATCGCTCGT GGCCTAGCAA TGAATCCAGA CATCATGCTC TTCGATGAAC CAACTTCTGC 2700

CCTTGACCCT GAGATGGTTG GAGACGTACT TAACGTTATG AAGGAATTGG CTGAGCAAGG 2760

CATGACCATG ATTATCGTAA CCCATGAGAT GGGATTTGCT CGTCAGGTTG CCAACCGCGT 2820

TATCTTTACT GCAGATGGCG AGTTCCTTGA AGACGGAACA CCTGACCAAA TCTTTGATAA 2880

CCCACAACAC CCTCGTCTGA AAGAGTTCTT AGATAAGGTC TTAAACGTCT AAACTCAAAC 2940

TGTAAGGATT TCCTTGCAGT TTTTCTACCT CGTATTGGAA TTTTTGATTT TTCGGAAAAT 3000

TATGTTAGAA TTAAGTTTAT GAAATGAGGT TTCCTCATAC CTAGCAAGAC TAGGAATAAA 3060

AATAGAAATT AGGTAGCTAG ATGTCATCTA AGGTTATTGT TACAATTTTC GGTGCGAGTG 3120

GAGACCTGGC TAAACGCAAG CTCTACCCTT CCCTTTTTAG ACTATATCAA TCCGGCAATC 3180

TTTCCAAGCA CTTTGCCGTT ATTGGAACTG CCCGTAGACC TTGGAGTAAG GAATATTTTG 3240

AATCTGTAGT TGTCGAGTCC ATCCTTGATT TGGCAGATAG TACCGAGCAA GCCCAAGAAT 3300

TTGCTAGCCA CTTCTACTAT CAAAGCCATG ATGTCAATGA TTCGGAACAT TATATTGCTT 3360

TGCGTCAATT ACAAGCTGAG CTTAATGAAA AATACCAAGC TGAACACAAT AAGCTCTTCT 3420

TCTTGTCTAT GGCACCTCAG TTCTTTGGAA CCATTGCCAA ACACCTCAAA TCTGAAAACA 3480

TTGTCGATGG CAAAGGTTTT GAGCGCTTGA TCGTTGAAAA ACCATTTGGT ACAGATTACG 3540

CAACTGCAAG CAAGTTGAAT GACGAACTCC TAGCAACATT TGACGAAGAA CAAATTTTCC 3600

GTATCGACCA TTATCTTGGT AAGGAAATGA TCCAAAGCAT CTTTGCAGTT CGCTTTGCAA 3660

ACTTGATTTT TGAAAACGTT TGGAACAAGG ATTTTATCGA CAATGTTCAA ATTACCTTTG 3720

CGGAGCGCTT GGGTGTAGAA GAACGTGGTG GCTACTATGA CCAATCCGGT GCCCTCCGTG 3780

ACATGGTCCA AAACCACACT CTACAACTTC TTTCGCTCCT CGCCATGGAC AAACCAGCAA 3840

GCTTCACAAA AGACGAGATT CGTGCTGAAA AGATTAAGGT CTTTAAAAAC CTCTATCATC 3900

CAACTGATGA AGAACTCAAA GAACACTTTA TCCGTGGGCA ATACCGCTCT GGTAAGATTG 3960

ATGGCATGAA ATACATCTCT TATCGTAGCG AGCCAAATGT GAATCCAGAA TCAACAACTG 4020

AAACCTTTAC ATCTGGTGCC TTCTTTGTAG ACAGCGATCG ATTCCGTGGT GTTCCTTTCT 4080

TTTTCCGTAC AGGTAAACGA CTGACTGAAA AAGGAACTCA TGTCAACATC GTCTTTAAAC 4140

AAATGGATTC TATCTTTGGA GAACCACTTG CTCCAAATAT TTTGACCATC TATATTCAAC 4200

CAACAGAAGG CTTCTCTCTT AGCCTAAATG GGAAGCAAGT AGGAGAAGAA TTTAACTTGG 4260

CTCCTAACTC ACTTGATTAC CGTACAGATG CGACTGCAAC TGGTGCTTCT CCAGAACCAT 4320

ACGAAAAATT GATTTATGAT GTCCTAAATA ACAACTCAAC TAACTTTAGC CACTGGGATG 4380

AAGTTTGTGC GTCATGGAAG TTGATTGACC GTATTGAAAA GCTCTGGGCT GAAAATGGTG 4440

CCCCACTTCA TGACTATAAA GCTGGAAGCA TGGGACCTCA AGCCAGCTTT GACCTACTTG 4500

AAAAATTCGG TGCCAAATGG ACTTGGCAAC CAGATATCAC CTATCGTCAA GATGGTCGCT 4560

TAGAATAAAA AAATTTCCTG CAAGTTTATG CcTTGCAGGA TTTTTGCTTC TGATTAGATT 4620

AAACCTTCCA AGAGACCTTT CATAAAGTTT TCTGAGTTAA ACTCTCCAAT ATCATCGATT 4680

TTTTCACCAA AACCAATCAA TTTTACAGGA ATATTGAGTT CTTCACGAAT GGCTAGAACC 4740

ACACCTCCTC GAGCAGTTCC ATCAATCTTA GTCAAAACAA TTCCCGTTAA AGGTGTGATT 4800

TTCGAAAATT CTTTGGCCTG TACTAGGGCA TTTTGACCTG TTGATGCATC AAGTGCCAAG 4860

AAGGTTTCAT GTGGTGCTTC TGGCACAACA CGTTTGATAA TACGACCAAT CTTTTCCAAC 4920

TCAGCCATAA GGTTATCCTT ATTTTGCAGA CGACCAGCAG TATCAATCAT GAGAATATCG 4980

ATACCTTCAG TCACGGCACG TTCCATACCA TCAAAGACCA CGCTGGCTGG ATCAGCTTTT 5040

TCAGGTCCAG TTACTACTGG AACATCTACT CGTCGGCCCC ATTCAGCTAG CTGAGCTACT 5100

GCACCCGCAC GGAAGGTATC TGCTGCAACC AGCATGACCT TCTTACCAGC TTGTTTGTAG 5160

CGGTGGGCTA GTTTTCCGAT AGAAGTTGTT TTCCCAACAC CATTCACACC AACAAAGAGC 5220

ATAACTGTCA AGTTATCTTG GAAGTGGATG CTTTCATCGT AGCTACCATC CTTTTCATAA 5280

AGCTCAACCA ATTTCTCAAT GATGACACGA CGAAGTACAT CAGGTTTCTT GGCATTTTCA 5340

AGCTTGGCTT CGTAACGTAG TTCCTCCGTT AAGTTAGAAG CGACTTGGAC ACCAACATCA 5400

CTCATAATCA GCAGTTCTTC CAGTTCCTCG AAAAATTCTT CGTCAACAGA GCGGAAGTTA 5460

GCAAAGAAGG CATTCAAGCG GGCACCGAAA CCTGTGCGAG TTTTCTTAAG ACTGCGGTCA 5520

TATTTTTCCT GAACAGTTTC TTCTGTTTGA GGAGCTTCTG GTTCAAGCAC TTCAGAATTA 5580

TTTTCTTCTA CAGTTCCTTC GTGCTCAAGC TTCTCTTCCT CTGGTAATTC TTCTGAGTTT 5640

GGTAATTCTT CTATTTCTTC TTGAGAAACC CCTACAGCTG GCTCTGAATC CTGACTTTCT 5700

TCAACTGTGT CTTGGATTTC CTCTTCTTGG AACACAGCTT GTTCAACAAT TTCAACCTCT 5760

GCTTCTTCCT GAGAAACTTC CTCAACTTCT GTGAAGGTAG GATCAACATC TTCAGACAAA 5820

TCAAGATTTT CCAGAGCTTC TTTTACAACT TCTTCGATTT TAGGTTCTTC TTTTTTTCCG 5880

AATAGACGGT CAAACAATCC CATATCTTAG TTCTCCTTTA GCACATATTC TTCGATAGCC 5940

CAGGCGACAG CTTCCTCATC GTTGGTCATC GGCGTCACTA CATTTGCGGC TGCCTTTACT 6000

TCAGGAACAG CGTTTTGCAT AGCAACACCA AGACCTGCCC ATTCAATCAT AGAGAGGTCA 6060

TTGGCCTCGT CACCACAAGC CATCACTTGA CTTTGGTCGA TTCCAAGATG GCTGATTAGT 6120

TTTGCCAAAC CTGTTGCTTT ATGAACATTC TTTGGTGACC ATTCTAGCAA CATTTCACGT 6180

GATTTAAAGA TTTCATATTG GTCAAACAAT TCTGGAGAAA TCTTCTGAAT GGCTGCATCC 6240

AAGGGTTCTT GAGCAAAGGC AGTCACGCAT TTGTTGTAGG TCATTTGACT AGATAAGTCT 6300

TCAAAGTCCA CTGGAACAAA GGTCAAAGCT GGATTGAATT TGGCATAAAG ACTTTCTTGG 6360

TCCGATTGGA TTTGATAAAC TGTTCCTTCT GAGATGGCAT CAAGAGGCAG TGATAATTTC 6420

TCTGTTTCTT CATACAAACG TGCCACATCA TCATATGAAA AGACTGTTTT ATCAAGGATT 6480

TCTCCTGTAT TTTTCTGAAC TAATCCACCA TTAAAAGTAA TGGTATACTC ATCTTCCTGA 6540

CCGTCAGTCC CTAACTCATG GAGAAAGAAA TCCATGGCTT TTAAGGGACG ACCAGTTGTC 6600

AATACGACCT TGATACCACG ATCACGCGCA gCTTGCAAGG TTTCCTTGGT ACGATCCGTC 6660

AGCCTTTTAT CAGTAGTCAG CAAGGTCCCG TCCAAGTCCA ATGCAATCAA TTTTATATCT 6720

GCCATTATAA GCCCTCCATA TAAGCTATAA CCGACCGTTC CTTATGGTGA CCAATCACAG 6780

TCTTTGCTAA TTCTAAAATT TCAGGTCGTG CATTTTCAGG AGCTACAGGA TGTCCCACAA 6840

CCTGCATCAT ATGTAAGTCA TTAAGATTGT CTCCAAAAGC CATGACCTGA TCCATTGTGA 6900

TACCAAGTTT TTTAACTAAT TCAACAATGG CCACTCCCTT ATCGACATAG TCCAGAACAA 6960

TATCAATGGA TTCAAAGCCA GTTGTCATGG CCTTAACACC AGGAACGTTT TCGTTTACCC 7020

AAGCCTCCCC ATCTTCCAGC GTTTCTTCTG TGAAGTTGGT TGTAAATTTG AAAATGTCAT 7080

CTGTGATATC TTCCAAACTC GCTACTTTTT GGATATTTTC ATTATAGTGC TGACTCACTT 7140

TCAAATAGGT CTCATCAACC GTATCTAGAA CATATGAACC CTTCTTACCC GTCAAGAGCA 7200

GTTTATTGAT ATCTACATAA GGTGAAGTTT TCAGCTTTTC AAAAGTTGCC AGATAAAAGT 7260

CACGAGACAT AGTCGCTTCA TACAAGTCCT GACCTTGATA CTCTACCAAA CTGCCATTTT 7320

CCGCGATGAA AATAATGTCA TCACGAACAC CAGCAAATAA TTTTTCTAGA GACAGAAATC 7380

CCCGACCCGA AGCTACCGCA AAGTAAATCC CTTTTTCCTT GTAGGAAACC AAGAGAGACT 7440

TGAGACGATC CATATCAAAG CGTCCATTCC CATCTAGGAA GGTTCCGTCC ATATCCGTTG 7500

CTACTAGTTT AATTGTCATC CTTCAATACT TTCTAAATCT TTTAACTTAA CTGAAACAAT 7560

CTTTGAAACA CCCGATTCTT GCATGGTCAC TCCATAGATG GAATCAGCCG CTGCCATGGT 7620

TCCCTTACGG TGGGTTACGA CGATGAACTG GCTGTCCTTG TCAAAGCGGT TGAGGTAATC 7680

CCCAAAACGT TTAACATTGG CTTCATCCAG CGCAGCTTCC ACCTCATCCA AGATAACAAA 7740

TGGAATAGTC TTGACACGAA TAATGGAGAA GAGCAAGGCA AGAGCCGATA GGGCTTTTTC 7800

ACCACCACTC ATGAGATTAA GAGACTGGAT TTTCTTGCCT GGTGGTTGGA CAGAAATTTC 7860

AACCCCAGCT GTCAGCAAGT CTCCTTCAGT CAAAATGAGG TCAGCCTGAC CTCCACCAAA 7920

CATCTGCTTG AAGGTCACTT TAAAGGACTC ACGAATGACC TCAAAGGTTG ATTTAAAGCG 7980

TTCCTTGACC TCATCATTCA TCTCTGTAAT GGTCTCAAGG AGCAGGTTTT TCGCAGACAA 8040

AATATCATCA CGTTGGCTAT TTAGGAAATC CAGACGGTTG TGAACTTCTT CGTACTGTTC 8100

AATAGCGTCT AAATTGACAG GACCCAGTGA GCGTATAGCC TTCTCTAAAT CCTTAACTTC 8160

TTGCTCTGCC AGATTGAGAT TTTCCAACTC ATGCGCCTTT TCTAAAGCTT CTGTGTAGCT 8220

GATCTGGTAC TGGTCTGTTA ATTGACTTTG TAGATGGCGC AAGCGCTCGC TAACCTTTTC 8280

TTTCTTGGCT TCAGCACGAG TTTGCTTGCG AATCCACTCT TCATTCTGCT GGCGAGCCTG 8340

ATCCAAATGA CTAGCAATAT CATCCAGTTG ACCCTCAATA TCATCCAACT CAAACTGCTT 8400

GCGAATCAAA CCTTGTTGGA GATTTGTTTT TTGAGTTTTG GATTCTTCCG CCTGTTGACT 8460

GAGCAATTCT GTATCAACCT TCTCAAGATT ATCAATCTTT TCTTGAAGAA GGCGCTGGAT 8520

TTCCTCTTGT TCAAAATCAA GATTGTCCAA TTCCTTGCCT AAGCGTTCAA TATCAGCAAC 8580

TTCATAACGT TTTTGCCCTT GCAGTTCTGT CTTAAGCAAA CGAGCTTGCG CTAGCTCTTC 8640

CTGCAAGTTT TGATAGCGTT CTTGGATGGC ATTTTTGTTA GACTTAATCT CTTCAATCTC 8700

AGCTTCCAGA TTTTGCTTGT CACTGGAGAT TGCAGCAAGA CGCTCTTGGC AGTTTTCCTT 8760

ATCCGCTTGC CAATCTCCCT CGGAAAGACG ATCTATTTCC TCTTCTTGGA GTTTCCAAAG 8820

AGTTTCCAGT TCTTCAACTT GCTGACTAGT TTGCTGATAA GCGAGGAACA AGCCTTGCTC 8880

CTGAATACGT GCCTGCTCTC CTTGAGATTT AATAGCTTCT AATGACTCGG TCAATCTGGC 8940

CATCTCATCT TGCAAGGTCT TCAAAGTCGC CTCTTCTGAA CCCAAGCTTG CTTCTTCTTC 9000

AGCAATTTCT TTTTGTAATT GCTCCAGTTC TGGCTTGATA AAAATGCTGT TATTCTGGCG 9060

ATTGGCACCA CCTGCATAAG AACCACCTGT GCGCAACTCT GTCCCATCCA ATGTCACCAT 9120

ACGAACCTGA TAACGAACTT GGCGAGCTGC TGCACGCGCA TGTTCTACGG TATCAAAGAT 9180

AGCCGTCGTA GCTAGCAAGT TCTTGAAAAT GGCTTCCAGT CTAGTATCAA AAGTCACCAA 9240

CTCATCTGCC ATCCCAAGGA AACCTGGGCT TACAGCGATA GCATCTTGGT TCTGACTAGA 9300

AATCGTACGC GCCTTGATAG TGGTCAAAGG AAGAAAGGTT GCACGACCGG CTCTGTTCCG 9360

TTTAAGGAAG TCAATAGCCT TGGTTGCCGA CTCTTCATCT TCTACGATGA TATGCTGGCT 9420

ACTTGCCCCT AAGGCAATCT CTAGGGCAGT TTGATAATAA ACATCAAAGG TCAGATGCTC 9480

ACTGACTGCA CCAATAATCC CACCTAGGCG ATCTTTTTCT TGGAGAACAC TCTTAACACC 9540

TGCATAAAAG TTACTATGAT TTCTCAGGAT ATTTTCCAAA CTTTGAGCTC TGGCCTGCTT 9600

GTTTTTGAGA TTATCCAGAC GGTCAAAGAG TTGGCTTTGT TGAGCTTGAT AGGAAGTTTT 9660

CTGCTCCTCT TGCTCCTTGG CAATAGCTTG GTAGTCAGCC AATAATTTCT GAACCTGCTC 9720

CTTGGCAGTT TCAAGCTCTT CCTTTTGCTG ACTAGCCTTC TCTTTAGCTA TAGCTAATTG 9780

CTCTTTCAGC TTTTCTAGTT GATCTGCTTG TTTTTGAGAA AGCTGACGAC TATTTTCCAA 9840

CTCATTCTCA ATACGGGTCA ACTGGTTTGA GACATCCGCT TCTTCTTGTA AAAGAGCTAC 9900

AAAGCGTTCA CGTAAGAGCT CAATCATCTG ATCAGGATCG TCTGAGAAAG CCAGCAATTC 9960

AGCTTCTAAA CGATTGAGTT TTTGATTATT TTGGACTAGA TTTCCCTCTA ACAGAGCTAA 10020

AGAGCTTTCT TTATCAGACT TTTCTTTGCT GAGTGAATTT CTCTTATCCT CCAAAGCAGC 10080

CAAACGGGCT TGTGCCTCCT GTTGATTCAA GGCCACTTGC TCGGACTCCA GTTTCGATAG 10140

GGCTAATTTT CTTTCTAAAT CACTAATCAG ACTAGTCAAG TCCATCAAAC TGCCTTGGTC 10200

TTTGGCCATT TCAGCCTGTA AATCTTGGCG TTGCTTTTTA AGAGTTTGAT TTTCTTCTTC 10260

TAATTTTTCA CGCTTTTGGT AATAACTCAT CAAGAGTTCT TGAACCTGAG TCAACTCTTC 10320

TTCTGTCGAC TCTAGTTCAG CCTTATTTTC CTTGATTTGA GCAACCAGAA CATCTAAATA 10380

AATAGCCTTA CGTTGTCCTT CCAAGTCTAA AAACTTACGG GCATTCTCAG CTTGCTTCTC 10440

AAGAGGCTTG ATTTGATTAT CCAACTCGTA GATAATGTCC TCTAAGCGGT CCAGATTATC 10500

CTGAGTTTGC TGCAGTTTAC TCTCGGTTTC TTTTCTGCGA GTCTTGTATT TTAAAACTCC 10560

AGCAGCTTCT TCAAAAATAG CTCGTCGTTC CTCAGGCTTG GAATTAAAAA TCTCCTCAAC 10620

CTTCCCTTGG GAAATAATAG AGAAGGAATC TCGTCCCAAT CCAGTATCCA AGAAGAGGTC 10680

ATGAATATCA CGCAGACGGA CTTTCTTGCC GTCAATCTTG TATTCGCTAT CTCCACTACG 10740

ATAGACATGG CGTTCCACCC TGATTTCTTG ACCTGCATCC TTGATAAATC CGTCATGATT 10800

ATCCAGAGTC ACAACTACAG AAGCATAATT GAGCGGTTTG CGACTTTCGG TTCCAGCAAA 10860

GATGATATCC GGCATCTTGC CCCCACGGAG ACTCTTGACA CTAGACTCCC CCAAAGCCCA 10920

ACGCAGACTT TCTGTAATAT TGGACTTTCC AGATCCATTG GGTCCAACAA CTGCCGTCAC 10980

ACCTTGGTCA AAAACGACCT TGGTCTTATC AGCAAAAGAC TTGAACCCCT GAATTTCGAT 11040

TTCCTTTAAA TACATGAATC CAGCCCCTTC TCAACGGCAT TTTTGGCAGC TTCCTGCTCT 11100

GCTAATTTCT TAGAACGACC TTGGCCTTGA CCGATGCTCT TACCTTCAAC AAGAACTTCT 11160

ACATCAAAAA CCTTATCGTG AGCAGGCCCT GTTTCAGAAA TCACCTGATA ACGAATAGCC 11220

ACATCACCAT TGACCTGAAG CAACTCTTGG AGATGGGTTT TATAGTCTGT AATCATCTCA 11280

AACTCGCCTG CTTCAACCTT AGGAATCATG ACTTGATAGA TAAATTCCTT GACCTTGGCC 11340

ACATCCTTAT CCAAAAGAAG GGCACCAAGA AAGGCTTCAA AGGCATCACC AAGAATGGTG 11400

TCACGATTGC GACCACCTGA TTTTTCTTCC CCTTTACCCA ACTTGATAAA CTGGTCAAAC 11460

TGGCAATCAC GCGCAAAACC AGCTAAACTC TCCTCACGGA CAATCATAGC ACGGAGTTTT 11520

GATAGGTCAC CTTCAGGCTT TTTAGGATAT TTTTTATATA GATATTCTGA AATCAATAAC 11580

TGTAGAACAG CGTCTCCTAA AAATTCCAAG CGTTCATTGT GTGAAATTTT TAAGAGGCGG 11640

TGCTCATTGG CATAACTCGT ATGAGTAAAG GCAGTTTCCA GTAACTTTTT GTCTGCAAAT 11700

TCGATTGCAA AATGATTCTT TAGTACAGTT TGTAATTCTT TCATACCAAC CTCTTTCTAA 11760

CTGATAATAG TCCTTTTTAT TATATCAAAA AAAGCCCCCT GAGTCACTCT AAAACGGGAC 11820

TGGAAAGCAT TTGGGAATTC TTTAGACAGA GATTCTCAGT TTTAGCGGCA AATTTGGGTC 11880

AGGATAAAGA AAAAAGCCCT ATTAAAGGCT TTTTAGGATG TTTACATCCA CCCTGAGGGA 11940

ATCGAACCCC CATCTCAAGA ACCGGAATCT TACGTGATAT CCATTACACT AAGGGTGGAA 12000

ACTTGTTTTA TTATAACAGA AATTTGCTCT AATAACAAGT TTTTTGGTCA AAGACCCCGT 12060

CTTAGTGGGA AGCATCCCCA TTCCAGATGG AGTTTTTCAC GATCACATAA TCAACGTGTT 12120

TAAGGTCAGC AACCTGACGT CCACCTGCAT AAGAAATAGC ACTTTGAAGG TCTTGTTCCA 12180

TCTCAGTTAA AGTGTCTTGC AGATGACCTT TAGCAGGAAG CAAGATACGT TTGCCTTCCA 12240

CATTTTTGTA AGCACCTTTT TGATATTGTG AGGCTGAACC ATAATATTCT TTGAACTGTT 12300

CACCATCGAC TTCAATCGTT TTCCCTGGAC TTTCAATGTG TCCTGCAAAG AGGGAACCAA 12360

TCATGATCAT GCTAGCACCG AAGCGGATAG ACTTAGCAAT ATCACCGTGA GTACGAATTC 12420

CTCCATCAGC GATAATCGGT TTACGCGCAG CCTTGGCACA CCAGCGTAGA GCAGCCAACT 12480

GCCAACCACC TGTACCAAAA CCAGTCTTAA CCTTGGTGAT ACAAACCTTA CCAGGACCGA 12540

TTCCGACCTT AGTAGCATCC GCACCAGCAT TTTCCAATTC ACGCACAGCT TCTGGTGTTC 12600

CCACATTTCC AGCAATGACA AAGGTATCTG GCAATTCTTT CTTGATGTGT TGAATCATAG 12660

AAATCACGCT ATCCGCATGA CCATGAGCAA TATCAATAGT GATATACTCA GGAGTATCAG 12720

CCTTGAGCTG GCTAACAAAA TCATACTCAT AATCCTTAAC ACCGACAGAG ATAGAAGCAA 12780

TGAGCCCTTG ATTGTGCATT CGTTTAATAA AAGGAATGCG TCCTGCCTCA TCAAAACGGT 12840

GCATAATGTA GAAGTAACCA CCTTTAGCCA GTTGCTCTGC TACATTTTCA TCCAAAATCG 12900

TCTGCATATT CGCTGGCACA ACAGGTAGTT TAAAGGTGTG ATTTCCTAAA GTGACACTTG 12960

TATCCGCTTC TGCACGGCTT TTAATGACAC ATTTATTTGG AATCAATTGA ATATCTTCGT 13020

AATCAAAAAT TGGAAATTCA TTTAACATAT CGATGTCTCG TTTCTTTTGT AATGACCTAC 13080

CTATGCTCTT GCATCACTAC GCCTTTTCCG ACGTTTCCTG G 13121

(2) INFORMATION FOR SEQ ID NO: 127:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 9578 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 127:

CCGAATGCAA TGTTTACGGT TGAACTTGAA AATGGACATC AGATTTTAGC AACAGTTTCT 60

GGTAAAATTC GTAAAAACTA TATTCGTATT TTAGCGGGAG ATCGTGTTAC TGTCGAAATG 120

AGTCCATATG ACTTGACACG TGGACGTATC ACTTACCGCT TTAAATAATC GAAAAACTTG 180

GAGGGATAAG AAATGAAAGT AAGACCATCG GTCAAACCAA TTTGCGAATA CTGTAAAGTT 240

ATTCGTCGTA ATGGTCGTGT TATGGTAATT TGCCCAGCAA ATCCAAAACA CAAACAACGT 300

CAAGGATAAG ATAGAAAGGA GAAAACATGG CTCGTATTGC TGGAGTTGAT ATTCCAAATG 360

ACAAACGCGT AGTAATCTCA TTGACTTATG TTTATGGTAT CGGACTTGCA ACATCTAAGA 420

AAATTTTGGC TGCTGCTGGA ATCTCAGAAG ATGTTCGTGT ACGTGATCTT ACATCAGATC 480

AAGAAGATGC TATCCGTCGT GAAGTGGATG CAATCAAAGT TGAAGGTGAC CTTCGTCGTG 540

AAGTAAACTT GAACATCAAA CGTTTGATGG AAATCGGTTC ATACCGTGGT ATCCGTCACC 600

GTCGTGGACT TCCTGTCCGT GGACAAAACA CTAAAAACAA CGCCCGCACT CGTAAAGGTA 660

AAGCTGTTGC GATTGCTGGT AAGAAAAAAT AATATAGGAG GTAAAAGTCT TGGCTAAACC 720

AACACGTAAA CGTCGTGTGA AAAAGAATAT CGAATCTGGT ATTGCTCATA TTCACGCTAC 780

ATTTAATAAC ACTATTGTTA TGATTACTGA TGTGCATGGT AATGCAATTG CTTGGTCATC 840

AGCTGGTGCT CTTGGTTTCA AAGGTTCTCG TAAATCTACA CCATTCGCTG CTCAAATGGC 900

TTCTGAAGCT GCTGCTAAAT CTGCACAAGA ACACGGTCTT AAATCAGTTG AAGTTACTGT 960

AAAAGGTCCA GGTTCTGGTC GTGAGTCAGC TATTCGTGCG CTTGCTGCCG CTGGTCTTGA 1020

AGTAACAGCA ATTCGTGATG TGACTCCAGT GCCACACAAT GGTGCTCGTC CTCCAAAACG 1080

TCGCCGTGTA TAATCATCGC ATTACACTGC TTTTCGTTTA AGAGGGAGTA ACTAAATGAT 1140

CGAGTTTGAA AAACCAAATA TAACAAAAAT TGATGAAAAT AAAGATTATG GCAAGTTTGT 1200

AATCGAACCA CTTGAACGTG GCTACGGTAC AACTCTTGGT AACTCTCTTC GTCGTGTACT 1260

TCTAGCTTCT CTACCAGGAG CAGCTGTGAC ATCTATCAAC ATTGATGGTG TGTTACATGA 1320

GTTTGACACA GTTCCAGGTG TTCGTGAAGA CGTGATGCAA ATCATTCTGA ACATTAAAGG 1380

AATTGCAGTG AAATCGTACG TTGAAGACGA AAAAATCATC GAACTGGATG TTGAAGGTCC 1440

TGCTGAAGTA ACAGCTGGTG ACATTTTGAC AGATAGCGAT ATTGAAATTG TAAATCCAGA 1500

TCATTATCTC TTTACAATCG GTGAAGGTTC TTCTCTAAAA GCGACTATGA CTGTTAACAG 1560

TGGTCGTGGA TATGTACCTG CTGATGAAAA TAAAAAGGAT AATGCACCAG TTGGAACACT 1620

TGCTGTAGAT TCTATTTATA CACCAGTTAC AAAAGTCAAC TATCAAGTGG AACCTGCTCG 1680

TGTAGGTAGC AATGATGGTT TCGACAAATT AACCCTTGAA ATCTTGACAA ATGGAACAAT 1740

TATTCCAGAA GATGCTTTAG GGCTTTCAGC ACGTATTTTG ACAGAACATC TTGATTTGTT 1800

TACAAATCTT ACTGAGATTG CTAAGTCAAC TGAAGTGATG AAAGAAGCTG ATACTGAATC 1860

TGACGACCGT ATTTTAGATC GTACGATTGA GGAACTGGAC TTGTCTGTGC GTTCATACAA 1920

CTGTTTAAAA CGTGCCGGTA TCAATACTGT GCATGATTTG ACAGAAAAAT CTGAAGCAGA 1980

GATGATGAAA GTACGAAATC TTGGACGCAA GAGTTTGGAA GAAGTGAAAC TCAAACTCAT 2040

TGATTTGGGT CTTGGATTAA AAGATAAATA AAGGAGGAAT ACATGGCTTA CCGTAAACTA 2100

GGACGCACTA GCTCACAACG TAAAGCAATG CTTCGCGATT TGACAACTGA CCTTTTGATC 2160

AACGAATCAA TCGTGACAAC TGAAGCTCGT GCTAAAGAAA TCCGTAAAAC TGTTGAAAAA 2220

ATGATTACTC TAGGTAAACG TGGTGATTTG CATGCACGTC GTCAAGCAGC TGCTTTCGTA 2280

CGTAATGAAA TCGCATCTGA AAACTATGAT GAAGCAACTG ATAAGTACAC TTCTACTACA 2340

GCACTTCAAA AATTGTTCTC AGAAATCGCA CCTCGTTATG CTGAACGTAA CGGTGGATAC 2400

ACTCGTATCC TTAAAACTGA ATCACGTCGT GGTGATGCAG CGCCAATGGC GATCATCGAA 2460

TTAGTATAAA ATCATCAATT TTGTTGAGTG TTATGATGAT GGAGTCTTGT GCTCTTAGTC 2520

TAGCTCTGGT CTACCGCTAG GATTTCGGTC CTAGCGGGAA CACTCATCAT AAGTTGGGAT 2580

AGTAGACGCT TGTTTACGAA ATTGTTTTTT TCTTAAGAAC AACTTCGTAA GCAGGCGTTT 2640

TTGAGTATTT TCGTTAGAAT TATGCTATAC TATTTGAAAA GAATCCTGTT TAATGTTAAG 2700

GTTTCTTATT TTAAGAAGAA TTGGAGTTTA CTTATGAAAG CCATTATAAC TGTTGTTGGT 2760

AAAGATAAAT CTGGAATTGT TGCAGGTGTT TCTGGTAAAA TTGCAGAATT AGGATTGAAT 2820

ATTGACGATA TCTCTCAAAC TGTCTTGGAT GAATATTTTA CGATGATGGC TGTTGTATCT 2880

AGTGATGAAA AGCAAGATTT TACCTATCTT CGTAATGAAT TTGAAGCTTT TGGGCAAACT 2940

TTGAATGTAA AAATCAATAT TCAGAGTGCA GCGATTTTCG AAGCTATGTA TAATATCTAG 3000

GAGGTCATCA TGGATATTAG ACAAGTTACT GAAACCATCG CCATGATTGA GGAGCAAAAC 3060

TTCGATATTA GAACCATTAC CATGGGGATT TCTCTTTTGG ACTGTATCGA TCCAGATATC 3120

AATCGTGCTG CGGAGAAAAT CTATCAAAAA ATTACGACAA AGGCGGCTAA TTTAGTAGCT 3180

GTTGGTGATG AAATTGCGGC TGAGTTGGGA ATTCCTATCG TTAATAAGCG TGTATCGGTG 3240

ACACCTATTT CTCTGATTGG GGCAGCGACA GATGCGACGG ACTACGTGGT TCTGGCAAAA 3300

GCGCTTGATA AGGCTGCGAA AGAGATTGGT GTGGACTTTA TTGGTGGTTT TTCTGCCTTA 3360

GTACAAAAAG GTTATCAAAA GGGAGATGAG ATTCTCATCA ATTCCATTCC TCGCGCTTTG 3420

GCTGAGACGG ATAAGGTCTG CTCGTCAGTC AATATCGGCT CAACCAAGTC TGGTATTAAT 3480

ATGACGGCTG TGGCAGATAT GGGACGAATT ATCAAGGAAA CAGCAAATCT TTCAGATATG 3540

GGAGTGGCCA AGTTGGTTGT ATTCGCTAAT GCTGTTGAGG ACAATCCATT TATGGCGGGT 3600

GCCTTTCATG GTGTTGGGGA AGCAGATGTT ATCATCAATG TCGGAGTTTC TGGTCCTGGT 3660

GTTGTGAAAC GTGCTTTGGA AAAAGTTCGT GGACAGAGCT TTGATGTAGT AGCCGAAACA 3720

GTTAAGAAAA CTGCCTTTAA AATCACTCGT ATCGGTCAAT TGGTTGGTCA AATGGCCAGT 3780

GAGAGACTGG GTGTGGAGTT TGGTATTGTG GACTTGAGTT TGGCACCAAC CCCTGCGGTT 3840

GGAGACTCTG TGGCACGTGT CCTTGAGGAA ATGGGGCTAG AAACAGTTGG CACGCATGGA 3900

ACGACGGCTG CCTTGGCCCT CTTGAACGAC CAAGTTAAAA AGGGTGGAGT GATGGCCTGC 3960

AACCAAGTCG GTGGTTTATC TGGTGCCTTT ATCCCTGTTT CTGAGGATGA AGGAATGATT 4020

GCTGCAGTGC AAAATGGCTC TCTTAATTTA GAAAAACTAG AAGCTATGAC GGCTATCTGT 4080

TCTGTTGGAT TGGATATGAT TGCCATCCCA GAAGATACGC CTGCTGAAAC TATTGCGGCT 4140

ATGATTGCGG ATGAAGCAGC AATCGGTGTT ATCAACATGA AAACAACAGC TGTTCGTATC 4200

ATTCCCAAAG GAAAAGAAGG CGATATGATT GAGTTTGGTG GTCTATTAGG AACTGCACCC 4260

GTTATGAAGG TTAATGGGGC TTCGTCTGTC GACTTCATCT CTCGCGGTGG ACAAATCCCA 4320

GCACCAATTC ATAGTTTTAA AAATTAAGAA AATAGGAGAA ATTTTAAGTT CTATTTAAGA 4380

TTAGACGTGT ATACTATAAT CATTAAATAA AGACCTCCTA ATATTATTTG AAACAGATAA 4440

CACTGAATTA GTTTGAATTT GATTTTCATC TAATATCTTT ATTTAATGAA CTCCTAAACT 4500

TTTTCATAAT AATCTCCTTC AAAAGTCGCC TGTATGGGTG GCTTTTATTT TATCATTCAT 4560

GATATAATAG AAGCAAACGG AGGACGGAAA ATGGTAAAAG TACGATTGTA TTTGGTACGT 4620

CATGGCAAGA CCATGTTTAA CACGATTGGT CGCGCGCAAG GTTGGAGCGA TACTCCCTTA 4680

ACTGCTGAAG GTGAACGAGG GATTCAAGAG TTAGGAATCG GTTTGCGAGA ATCTGATCTA 4740

CAGTTTGAGC GTGCTTATTC GAGTGATTCT GGTCGTACCA TTCAGACCAT GGGAATTATC 4800

CTTGAAGAAC TTGGCTTGCA GGGGGAAATC CCTTATCGCA TGGACAAGCG TATCAGAGAA 4860

TGGTGTTTCG GTAGTTTTGA TGGAGCCTAT GATGGCGATC TTTTCATGGG CATTATTCCT 4920

CGTATCTTTA ATGTGGACCA CGTTCACCAA TTGTCTTATG CTGAACTGGC TGAGGGCTTG 4980

GTAGAGGTCG ATACAGCTGG TTGGGCTGAA GGCTGGGAAA AACTCAGTGG CCGAATCAAG 5040

GAAGGCTTTG AAATGATTGC AAAAGAAATG GAAGATCAAG GTGGAGGTAA CGCCCTTGTT 5100

GTCAGCCATG GAATGACTAT TGGAACCATT GTTTATCTGA TTAATGGCAT GCATCCGCAT 5160

GGTCTGGATA ATGGTAGCGT GACAATCCTT GAATATGAGG ACGGCCAGTT TAGGGTTGAA 5220

GTTGTCGGTG ACCGTAGTTA CCGAGAGCTA GGACGTGAGA AGATGGAAGA AGGCTCTATT 5280

TAATCAGTCT AGACTTGCTT GCCATGAGCT AGGGATTTGA TAAGAATATC AAGATAAGAA 5340

AAAACAGCCG AGGGCACTCC TTTCGGCTGT TTTTGATGTG GAAAACTAAA GTGTAATGCT 5400

ATTGCTTTTA GAGATTTTCA TAAACAAGAG CAAGGAACCT ACTGTTAGAA CAGTCAGGAT 5460

AGTTGACAAG GTTGCGGCTA CACCGTAATT TCCTCTGAGA ACCTCTGTAT AAATAGCTAC 5520

AGTCATTGTT CTTGTTTTGA CATTGTAGAG GAGGATAGAA GTAGAGAGTT TTGAAATCAT 5580

TGTGACTCAA GATAAGATGG CTCCAGAAAT GATACCAGAT AGCATCATTG GAGTTGTAAT 5640

CTTAGCAAAG GTATTGAGAC GACTACTTCC TAAGCTTTCA GCAGCTTCTT CAATACTTGG 5700

TGCTATTTGT TGTAAGCTAG CAACAGATGA GCGAATAGTA TAAGGTAATC TTCTGGCAGA 5760

TAGAGACATA ATCAAGATGA AAGCAGTCCC TGTAATCATA AGAAATCCAC TTCCAAATAG 5820

ACCAGTATTG AAGGAAGAAA TGAAGGCAAT CCCTAGAACG GTTCCTGGTA CAATATAAGG 5880

TACCATACTG AGGCTGTCAA TTAAGTTTGT AAACAAATTC CGTTTTCTAA CGGCTAGGTA 5940

GGAGATAAAT GTCGCAAATA GAACAACTAG AACTAAGGCA ATCAAAGGGA TACGAATGGT 6000

ATTGAAAATA GCAGATCCCA TACGATGGAA AGCTACCTTG TAACTGTTTG GAGAATAACC 6060

TTTAACAGAT ACCATACCTG ATGTTTTTAG GAAAGAGGTA TAAATTAAGT AGATTTGAGG 6120

TAAAACAGAG ATAAAGATAA TTCCGTAGAC TGTTGCATAA ATGGCAGCCA TTTTTCCTTT 6180

TGTAGTTTTT TTAGGCTCAA TTGGATGGAG CAGATTCATG CTGAAACTGT AGCGGTTTGC 6240

AATGTGTTTT TGGATAAGGA AAATTGCCAA GGCAATGATA ATCGCCATAA TTGCAAAAGC 6300

AGAATTTCCT CCAACCTCGC TAATAAATTG GGTATAAATC AGGACAGGGA AAGTCCGATA 6360

CCCTTCGCCA ATCAACATAG GCGTTCCAAA GTCTGAGAAT GCTCTCATAA ATACAAGCAA 6420

GGAGCTGCTA GTAAGGTTGG AACTAGGAGA GGTAAAACAA CCGTTACGAT AGGTTTAAAT 6480

CCGAAGGACC CCATGCTTTC AGCTGCTTCA AGTAGAGAAT TGTCAATACT GTTCATTGTT 6540

CCAGCAACAT ATAGAAATAC CAGTGGGAAT AGTTGCAGTG TAAAGACAAG TACAATTCCT 6600

TTGAATCAAT AAATATCGAT AGCTGGAAGA TAAAGGGCAT TTGTCAAAAA TTTAGTGATG 6660

ACCTCATTTC GTCCTAGCAA GAGAACCCAG GAGTAGGCTC CTACGAAAGG AGCTGACATG 6720

GAAGCAATGA TAATCAATAT TTGTAGAAAT TTCTTCCCCT TGAAGTCATA CATAGAGAAG 6780

AGATAAGCTA ATAGGGTTCC TACAACTAAG GAAGTGATAG TAGCGGTAAT GGAAACCTTG 6840

AAACTGTTGA CTAGTGTCTC AGAGTAGTAG GCTTTACTAA AGAAAGTGAC AAAATTAGCT 6900

AGTGAGAATT GTCCTTCATG TATAAGTGCT TGCTTGAGCA CGGTAACGAT AGGATAAACG 6960

AGAAAGATAG GATAGGTAAG AAAGAGGAAG AAAGAGGAAA CTGTCCAAAT ATTTAGTTTT 7020

TTACGTTCCA TGGTTGACTC CTTTTATCAG GTTTTGGGAA CCATCTGCAG AAAAGATGTT 7080

TAATTTTTGC GTATTGATTC GTAGACGAAT ACGATTGCCT TTTTGTAGAT CTTCTTCAAA 7140

AGTTGATTCT TCACTAACTT GAATTTTTGA GGCAAAACCT GTCTCAATGA AATAATCCGT 7200

ATTTAGTCCA AGATAGACGC TATCTCTAAT AGTTCCTTCA ATATCTCCAG ATTCATCTTT 7260

GATAAACTCT TCGGGACGAA TGCTTACATG AATAGCTTGC TCCTCAACCT GATCAAGAGC 7320

TGGCATTCGA AGGGCATAGC CATCTGAAAA GACGATATAA GCGCCGTCGC TCCGTTTTTC 7380

AAGATTGGCA GGGATAATAT TTGTGCGTCC GATAAAGGTT GCCACAAACT CATTAGCTGG 7440

TTTATGATAG AGTTCTTTTG GTCGGCCGAT TTGTTGGATC ACCCCATCTT TCATAACAGC 7500

AATTTGGTCT GAAATAGCCA TGGCTTCTTC TTGGTCGTGG GTTACATAAA CAGTTGTAAT 7560

TCCCACTTCG TGTTGGATTT CTCGGATGGC TTGACGCATA TCCAAGCGAA GTTTGGCCTC 7620

CAGATTACTA AGTGGCTCGT CCATGAGGAG AACACTTGGA TTAACCGCTA AGGCGCATGC 7680

CAAGGTGACA CGTTGTTGTT GTCCACCACT GAGTTTATCG GGCTTTCGAT CCGCATATTG 7740

AGCAATTTGC ATGAGTTCAA GATACTTGTT GGTCTGTTGA ATCAATTCTT CTTTTGGAAC 7800

CTTCTTTTGC ATAAGACCAA AAGCAACGTT GTCTCGGACA GTCAAATGTG GGAAAATAGC 7860

GTAGTTTTGG AAAACCATCC CGATATTGCG TTTGCTGGGT TCCATATTAT TGATTTTTGT 7920

ATCATCGAAG TAAAATTCTC CACCTTCGAT ACTGTTGAAA CCTGCAATCA TACGAAGAAG 7980

GGTCGTTTTC CCACATCCTG AAGCTCCAAG AAGGGTAAAG AGACTTCCTT TTGGAATTGT 8040

AATGTTCAAA TTCTCAATAA CAGGGACATC GTGGTAGATT TTTTTGGCGT TAATAATTTT 8100

GATCTCACTC ATAGTGAACC TCTTTTACTG TTTAGATTGG ATATCTGTAA AGACTTCGTT 8160

GTATTTCTTA ACGATATCTG ATTTATTCTT GATGACATAA TCATAATCTT CAGTGAGTGT 8220

TTTGATTTTG TCAATTGGTT TCATGTTTTC GCTTGTTTTA GCATTTTTAC GAACAGGACG 8280

GTTAGTAGTG GTTGTACCAA GTGTATCTTG TACTTCTTGA GAGATAATAA AATCGATAAA 8340

TTTCTTGGCA TTTTCCATAT TTTTAGATTT TTTAACGATA GCAGCACTAG CAGGTAGGAA 8400

GACGGTTCCT TCTTTTGGAT AGACTACCTT AATGTTAGCT CCGTCATTTA AGAGTTTAAC 8460

TGCTGGATCT TCATAAGAGA GACCAACAGC CATTTCTCCA TCAGCGACTA CTTTATAGAC 8520

ACTAGATGAA CTTGAACCGA TTTTACCATC AATAAGTGTG AAAAGATCTT TTACATAAGA 8580

CCAAGCCTTA TCATCTTTGT AACCACCTTG AGCTTGTAGC ATATTTGTTA ATTGAGCAAA 8640

GGCGCTAGAA GAGTTTGCTG GGTCAGCAGT TGCGATTTTT CCTTTTAGTT CAGGTTTGAA 8700

AAGATCGTTA TATCCTTCGA TGTTCATGCC TTTAGTTAAA TCAGGGTTGA CGATTAAAAC 8760

ACTACCATCT AGTGTATAAG GAGTAGAGTA GCCAGTTGTG TTTTGATATT CTTTGATAAC 8820

ATTATCATTT TCTTTTGAAG TATAGTTTTC AAAGAGTTCT CCGTGGGTAG TATATTGTGT 8880

ATAAGAACCA CCAAAGATAA CATCAGCTAC AGGAACTTCT TTTTCTGACT CTAGTTTTTT 8940

GAAAAGTTCT CCAGTACCAG CTTGAATCAG TTCTACTTTG ATACCATATT TTTCTTCAAA 9000

GGCAGGAATA GTTGCTCCAA TTAAGCCCTC TGAGTTTGGT GAATAAACGA CTAGCGAACC 9060

GCCGTCTCCT TTATCAGATG AACTGTCATC GGCAGATTCA TTAGAAGAAC AAGCAGCATA 9120

ATACATCCAT TTCTTTTTCA TGATGGATAC CTCCGTTGTG TTATTTAAGT TTATTTTAAA 9180

ACAATGTAAG CGTTTTTAAA ACATACAATT CTATTCTATA GTGTATTGAA TCTATAACAG 9240

TACACTTTGA CTGCTAAAAT ATTTCTATAA ATTAATTTGA CTTTCCTGAT AGAGATGTTC 9300

ACATCTTATT TCAATTCACT ATATTAGAGT AAAATTCTCT ACAAAAAGAA GAATAGCCTA 9360

TTTTACTATT CTTCTGAGTG ATTTCAATTC CTTTGGGGAA ATATGGAGAT ACTTTTTAAA 9420

TCCTGACAAA TGGTTGTTTC TTTTTCTAAA TCGGTGATAC TGTATCGGAG AATGCGCGTG 9480

AGGTCACAAA GGCTGCGATA GAGCTTCTAT GGAGAATTTC TTTTTGGAGA GATTTTTTAA 9540

AGGAATGAGA CATCCGCTAC CTCCTTGGAA GGTTTTTG 9578

(2) INFORMATION FOR SEQ ID NO: 128:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 13440 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 128:

CGGGCTGTTG TGACGATTCT TATTTCTATC TGTGTTATCT TTTTGGGAAC TATTTTGGGT 60

GTTGTCTTGG CTTTTGGGCA ACGTTCAAAG TTTAAACCGC TTGTTTGGTT GGCCAACTTG 120

TACGTTTGGA TTTTCCGTGG GACACCGATG ATGGTTCAAA TTATGATTGC CTTTGCTCTT 180

ATGCATATCA ATGCTCCGAC TATTCAGATT GGAATTTTAG GTGTTGATTT TTCGCGTCTG 240

ATTCCAGGGA TTTTGATTAT CTCTATGAAT AGTGGTGCTT ATGTTTCGGA GACTGTTCGT 300

GCCGGAATCA ATGCGGTTCC AAAAGGTCAG CTAGAAGCGG CTTATTCGCT AGGGATTCGT 360

CCTAAAAATG CGATGCGTTA TGTGATTTTG CCACAAGCAG TCAAAAATAT CTTGCCAGCA 420

TTGGGGAACG AATTTATCAC CATTATCAAG GACAGCTCCC TCTTATCAGC TATTGGGGTC 480

ATGGAGTTGT GGAATGGGGC TACAACAGTT TCTACAACAA CCTATCTACC TTTAACACCA 540

CTTTTATTTG CAGCATTTTA CTACTTGATT ATGACCTCTA TTCTGACAGT AGCCTTGAAA 600

GCTTTTGAAA AACATATGGG ACAAGGAGAT AAGAAATAAT GACAGAAACC TTGATAAAAA 660

TTGAAAATTT ACATAAATCC TTTGGAAAGA ATGAAGTATT GAAGGGCATC AACCTCGAGA 720

TTAAAAGAGG AGAAGTTGTC GTTATCATCG GTCCTTCAGG GAGCGGGAAA TCTACCTTGC 780

TTCGCTCTAT GAATTTGTTG GAAGAAGCAA CCAAGGGGAA GGTTATCTTT GAGGGAGTCG 840

ATATTACGGA CAAGAAGAAT GACCTGTTTG CCATGCGTGA GAAGATGGGC ATGGTTTTTC 900

AACAATTCAA TCTCTTTCCT AATATGACTG TGATGGAAAA TATCACCTTG TCCCCTATCA 960

AGACCAAAGG TGACAGTAAG GCCGTTGCAG AGAAAAGAGC TCAGGAACTT TTGGAAAAAG 1020

TTGGTTTGCC AGATAAGGCA GACGCTTATC CACAGAGTTT GTCAGGTGGC CAGCAACAGC 1080

GGATTGCCAT CGCGCGTGGG TTGGCTATGG AACCAGATGT TTTGCTCTTT GACGAGCCAA 1140

CTTCAGCCCT AGATCCTGAG ATGGTTGGAG AAGTTCTGGC TGTTATGCAA GATCTAGCCA 1200

AGTCAGGAAT GACCATGGTT ATCGTAACAC ATGAGATGGG ATTTGCCCGT GAGGTGGCAG 1260

ATCGTGTCAT CTTTATGGCA GACGGTGTGG TTGTTGAAGA CGGAACACCT GAGCAGATTT 1320

TTGAACAAAC CCAAGGACAA AGGACTAAAG ACTTCTTGAG TAAGGTTTTA TAAGTTAGCT 1380

TTGTTTAGCT ATTTGTAGCC AGCTTTAAAC GTTAAAGAGA AGATTAGTGA AAAGCTCAAC 1440

CAGAGCTTTT TCTTATAGTT TAAAGCTATA GGATTGCCTA GGAAAGAAGT GTTAGAGCTA 1500

CATTGTATTT TTTGGTATAA TTAAAGATAT TTGTAAGAAA AGAGAAGTGA TATGACACAG 1560

ATTATTGATG GGAAAGCTTT AGCGGCCAAA TTGCAGGGGC AGTTGGCTGA AAAGACTGCA 1620

AAATTAAAGG AAGAAACAGG TCTAGTGCCT GGTTTGGTAG TGATTTTGGT TGGGGACAAT 1680

CCAGCCAGCC AAGTCTACGT TCGCAACAAG GAGAGGTCAG CCCTTGCGGC TGGTTTCCGT 1740

AGCGAAGTAG TACGGGTTCC AGAGACCATT ACTCAAGAGG AATTGTTAGA CCTGATTGCT 1800

AAATACAATC AGGATCCAGC TTGGCATGGG ATTTTGGTTC AGTTGCCATT ACCAAAACAC 1860

ATTGATGAAG AGGCGGTTCT ATTGGCTATT GACCCAGAAA AGGATGTGGA TGGTTTCCAT 1920

CCTCTAAACA TGGGGCGTCT TTGGTCTGGT CATCCAGTCA TGATTCCTTC GACACCGGCA 1980

GGAATTATGG AAATGTTCCA TGAATATGGG ATTGACTTGG AAGGTAAAAA TGCAGTCGTC 2040

ATCGGTCGAT CCAATATTGT CGGAAAACCT ATGGCCCAGC TTCTTTTGGC AAAGAATGCA 2100

ACAGTAACCT TGACTCACTC ACGTACTCAT AATCTTTCCA AGGTGGCTGC AAAAGCAGAT 2160

ATTCTGGTTG TTGCAATCGG TCGTGCCAAG TTTGTGACTG CTGACTTTGT CAAACCAGGT 2220

GCGGTAGTCA TTGACGTTGG GATGAACCGC GATGAAAATG GTAAGCTCTG TGGGGATGTT 2280

GATTATGAGG CGGTTGCCCC ACTTGCTAGC CACATTACGC CAGTCCCTGG AGGTGTCGGT 2340

CCTATGACCA TTACTATGCT GATGGAGCAA ACCTATCAGG CAGCACTTAG GACATTGGAT 2400

AGAAAATAAG ATAAAAATTT TCTGAGGAAA GTGTATTTTC TATAGCTATA TCTAAAATGA 2460

TAGAAATGAA TATTAAATTT TAGAAATAAG TTTATAAAAG GAGGTTTGCG CCTCCTTTTT 2520

GTTGTATAAT GGAGTGAGGT GATTAGATGA TTTTAAAAAT TTATAATGGG GAATATAGTT 2580

TACAATGGGA TGGAATATAC TACTTAGCAC TAATTGATTA TCCAAATATT CAAGAGTGGG 2640

AATTAGAAAA AATTGCTAAA TTTATAGCTT ACGAAAAACT TCATAAACGT CAAACAAGTA 2700

TTGAGTGTGC TGATTCTTGT TTAAAAAAAG AAATTTTAGA TTACATCTGT CAGCATCCCT 2760

TTCTGCCACC ATTTACTCCT ACAGATAAAA GAGTAGCCTC GACTTATGAC CTACATAAGA 2820

GGTTAGTGAC TTCAGACTAC TGTAGTCATA CTACGACTAT AGATGCAGCG ATTTCTATTT 2880

TTAAAACTGG TCGTCTTTTA TCTGCTGTGA AAGCCTTTGG GCGAGATGCT GAGGAGTTGG 2940

TTTTGGATAG TCGAAATGCT GCATCTGATC CGATAGATTA TTTTGACTAT GTCATGTTAG 3000

GGTGGTCAAA TACAAGTTCT GGTTATCGAT TGGCGATGGA GCGTTTATTA GGTCGAGCTC 3060

CTTCAGAGAA AGAATTACAA GACAAGTTTA TTCCTGGAGT AAGTTTTCAT TTTATCTATA 3120

CAGATTTGAT TAAAGTTCCT GGTTATATTT TTGATGGTTA CCATGCTGTA AAAATTAAGG 3180

ACATGCTTAA TTTATTAAGT GAGTTGTATA TTTGCATTAT TCCAACTCAT AATAAGAGCC 3240

AATTTGAAAA TATTATTCCA ACCAAAATAC AAGATAGGGT GTATTATCTT GACTATGCTG 3300

GAGAAGACTT AGAAGAGTGG ACTAAGAAAG TCTATCAAGT TGTTTTAAAA CAATCAGATA 3360

AAGGATAGTT GAGGAAAAAA CGATGAAAGT GATTGATCAA ACCTTACTAG AAAAAGTCAT 3420

TATTGAACGT TCTTGTACAA GTCATAAAGG AGACTACGGT CGTCTGCTGT TGCTTGGTGG 3480

GACTTATCCT TATGGTGGTG CCATCATCAT GGCTGCTTTA GCAGCTGTAA AAAGCGGTGC 3540

AGGATTGGTA ACCGTTGGAA CGGACAGGGA AAATATCCCT GCTCTACACA GCCATTTGCC 3600

TGAGGCTATG GCCTTTTCTC TGCAAGATCA GTAATTGTTA CAAGAGCAAT TGGAGAAGGC 3660

AGAAGTTGTC TTGCTGGGGC CTGGTTTACG AGACGATACG TTTGGAGAAA ATCTTGTAAA 3720

ACAGGTCTTT GCTAGCTTAA AAAAGAATCA GATTTTGATT GTAGATGGAG GGGCCTTAAC 3780

CATCCTTGCT AGGACAAGTT TGTTGTTTCC ATCTAACCAG CTTATCTTAA CTCCCCACCA 3840

AAAAGAATGG GAAAAACTGT CTGGTATTGC TATTGAAAAG CAAAACGAAG GTACAACATC 3900

TAGTGCCCTG ACTTCTTTCC CTCAAGGAAC AATTTTGGTA GAGAAAGGTC CAGCTACTCG 3960

TATTTGGCAA GTTGGCCAGT CTGATTATTA CCAGTTAAAG GTTGGCGGTC CCTATCAGGC 4020

GACTGGTGGT ATGGGTGATA CACTGGCTGG AATGATTGCA GGATTTGCAG GCCAATTTCG 4080

ACAGGCCAGT CTCTACGAAC GTGTGGCAGT AGCAACCCAT CTTCATTCAG CCATAGCCCA 4140

AGAACTATCT CAAGAAAATT ATGTGGTCTT GCCGACGGAA ATTAGTAATT GTCTTCCTAA 4200

AGTAATGAAA AGATATGTCT AAAATAGTTA GACAAAAAAT GTTGATAATT TGTATCATTA 4260

TTCTTAATTC ACAAAAAACG AACGTTTAGT ATTCTTCTTG CTAAGAAACT AAATTTGTTC 4320

GTTTTTTTAC TCTTGTAAAT CTATTTTTGT TAGAGTTGAT TTGGTTTACA TCCGTACTTA 4380

AATTGATTTG TTAGAGCTCT ACTTTTATTA AAAAAATTCA ATTTCAAGGA TAAATAAGCA 4440

GTATTCTAAA GGTACTTTTA GATGAAATAA AAGCCTTTAC ATGGTATAAT AGAGGTAGCT 4500

CTTTAATGGA GGTGTTTGAG TGGAAAATCT GAAGAAAATG GCAGGTATCA CGGCTGCTGA 4560

ATTTATCAAG GATGGGATGG TTGTAGGGCT AGGAACAGGT TCTACTGCCT ATTATTTTGT 4620

CGAAGAAATC GGTCGTCGAA TCAAGGAAGA AGGCTTGCAG ATTACAGCTG TGACGACTTC 4680

TAGTGTGACC AGTAAACAGG CTGAAGGGCT CAATATCCCG CTCAAGTCTA TTGACCAAGT 4740

AGACTTTGTC GATGTGACAG TCGACGGGGC GGATGAAGTG GATAGTCAGT TTAATGGAAT 4800

CAAAGGCGGT GGTGGTGCCC TTCTCATGGA AAAGGTGGTC GCAACACCAT CAAAAGAATA 4860

CATTTGGGTG GTGGATGAAA GCAAGCTGGT CGAAAAACTA GGTGCTTTTA AATTGCCAGT 4920

AGAAGTGGTT CAGTATGGTG CAGAGCAGGT CTTTCGTCAT TTTGAACGAG CTGGCTACAA 4980

ACCAAGTTTC CGTGAAAAAG ACGGCCAACG TTTTGTGACC GATATGCAGA ATTTTATCAT 5040

TGACCTCGCC TTGGATGTCA TTGAAAATCC AATTGCTTTT GGACAAGAAT TGGACCATGT 5100

CGTTGGTGTT GTGGAGCATG GTTTATTCAA CCAAATGGTG GATAAGGTAA TCGTTGCTGG 5160

ACGAGATGGA GTTCAGATTT CAACTTCAAA AAAAGGAAAA TAGAAGGGGG CATAAGATGT 5220

CTAAATTTAA TCGTATTCAT TTGGTGGTAC TGGATTCTGT AGGAATCGGT GCAGCACCAG 5280

ATGCTAATAA CTTTGTCAAT GCAGGGGTTC CAGATGGAGC TTCTGACACA CTGGGACACA 5340

TTTCAAAAAC AGTTGGTTTG AATGTCCCAA ACATGGCTAA AATAGGTCTT GGAAATATTC 5400

CTCGTGAAAC TCCTCTTAAG ACTGTAGCAG CTGAAAGCAA TCCAACTGGA TATGCAACAA 5460

AATTAGAGGA AGTATCTCTT GGTAAGGATA CTATGACTGG ACACTGGGAA ATCATGGGAC 5520

TCAACATTAC TGAGCCTTTC GATACTTTCT GGAACGGATT CCCAGAAGAA ATCCTGACAA 5580

AAATCGAAGA ATTCTCAGGA CGCAAGGTTA TTCGTGAAGC CAACAAACCT TATTCAGGAA 5640

CGGCTGTTAT CTATGATTTT GGACCACGTC AGATGGAAAC TGGAGAGTTG ATTATCTATA 5700

CTTCAGCTGA CCCTGTTTTG CAGATTGCTG CCCACGAAGA CATTATTCCT TTGGATGAAT 5760

TGTACCGTAT CTGTGAATAC GCTCGTTCGA TTACCCTTGA GCGTCCTGCC CTTCTTGGTC 5820

GCATCATTGC TCGCCCTTAT GTAGGTGAAC CAGGTAACTT CACTCGTACG GCAAACCGTC 5880

GTGACTTGGC TGTATCTCCA TTTTTCCCAA CTGTTTTGGA TAAATTGAAT GAGGCTGGTA 5940

TCGATACTTA TGCTGTGGGT AAAATCAACG ATATCTTTAA CGGTGCTGGT ATCAACCATG 6000

ACATGGGTCA CAACAAGTCA AATAGTCATG GAATTGATAC ACTATTGAAG ACTATGGGAC 6060

TTGCTGAGTT TGAAAAAGGA TTCTCATTCA CAAACCTAGT TGACTTTGAT GCCCTTTACG 6120

GCCATCGTCG TAATGCTCAC GGTTACCGTG ATTGCTTGCA TGAGTTTGAT GAACGCTTAC 6180

CTGAAATTAT CGCAGCTATG AGAGAGAATG ACCTTCTCTT GATTACTGCG GACCATGGAA 6240

ATGACCCAAC GTATGCAGGA ACGGATCACA CTCGGGAATA TATTCCATTG TTGGCCTATA 6300

GCCCTGCCTT TAAAGGAAAT GGTCTCATTC CAGTAGGACA TTTTGCAGAT ATTTCAGCGA 6360

CTGTTGCCGA TAACTTTGGT GTGGAAACTG CTATGATTGG GGAAAGTTTC TTAGATAAAT 6420

TGGTATAAGA TGACGCGCTA TGCTTTGCTG GTGAGAGGTA TCAATGTTGG TGGTAAGAAT 6480

AAGGTCGTCA TGGCGGAGCT TCGTCAAGAA TTGACAAACT TGGGACTGGA AAAGGTTGAG 6540

AGCTACATCA ATAGTGGCAA TATTTTCTTT ACTTCGATAG ATTCCAAAGC CCAATTGGTT 6600

GAAAAGCTAG AGACTTTCTT TGCAGTCCAT TATCCATTTA TTCAGAGCTT TTCTTTACTG 6660

AGTCTAGAGG ACTTTGAGGC GGAACTTGAA AATCTACCAG CTTGGTGGAG CAGAGACTTG 6720

GCACGAAAAG ATTTTCTCTT TTACACTGAG GGTTTGGATG TGGACCAAGT CATCGCGACA 6780

GTTGAAAGTT TAGAGCTGAA AGATGAAGTG CTTTATTTTG GAAAACTTGG GATTTTCTGG 6840

GGGAAATTTT CTGAAGAATC CTATTCTAAG ACTGCCTATC ATAAGTACTT GCTGAAGGTG 6900

CCTTTCTACC GCCACATTAC TATTCGTAAT GCTAAAACCT TTGACAAAAT TGGTCAAATG 6960

CTAAAAAAAT AATAAAGGAG ACACACAATG ACATTTTTAA ACAAAATCCA TGAAACTGCT 7020

ACTTTCCTGA AAGAAAAGGG AATTGCAGCC CCTGAGTTCG GTCTAATCCT TGGATCAGGA 7080

CTTGGAGAAT TGGCAGAAGA AATCGAAAAT CCAGTTGTAG TAGACTATGC TGAGATTCCA 7140

AACTGGGGCC GTTCAACAGT AGTCGGTCAT GCTGGTAAAT TGGTATATGG TGAACTGGCA 7200

GGTCGCAAGG TCTTGGCTCT TCAAGGGCGT TTCCATTTCT ATGAAGGGAA TCCTCTGGAA 7260

GTGGTGACTT TCCCAGTTCG TGTGATGAAA GTTCTTGGAT GTGAAGGTGT TATTGTAACC 7320

AATGCAGCTG GCGGTATCGG ATTTGGTCCT GGTACCTTGA TGGCTATCTC AGACCATATC 7380

AACATGACGG GGCAAAATCC ATTGATGGGT GAAAACTTGG ATGACTTTGG CCCACGTTTC 7440

CCAGATATGT CTAGGGCCTA CACACCAGAA TACCGTGCCA CTGCCCATGA AGTGGCTAAA 7500

AAACTTAATA TCAAGCTTGA TGAAGGTGTC TATATCGGAG TTACTGGTCC GACTTATGAA 7560

ACACCAGCAG AAATTCGTTC CTATAAGACA CTGGGAGCAG ATGCAGTTGG TATGTCTACG 7620

GTTCCTGAAG TTATCGTGGC AGCCCACTCT GGCTTGAAAG TTCTGGGAAT TTCATGTATC 7680

ACTAACTTTG CGGCCGGTTT CCAAGAAGAA CTCAATCACG AAGAAGTTGT AGAAGTGACT 7740

GAACGTGTTA AAGGTGATTT CAAAGGCTTG CTTAAAGCGA TTCTTGCTGA ATTGTAAGAA 7800

AAAAGATTTA AAAGGGGGAG TGCCTCTGTT TTTTCAGGAT TGACTGCCTA TCCGGATTAA 7860

AGAAGAAACA GAGGAATACT ATGAGCTTCT TCCTGCTCTT ATAACTGAAA GAAGCGGAAG 7920

AATAGGTATG TCTGATCTGA TAGCCAGCAT TGTGAAAGAC AAGATTCTAG GATACTAGCA 7980

TTAGCTTCCT AGCCAAGCAG ACTAGTATGA TAAGGAGAGA TGAGAATGAA TTGACTTTCT 8040

GAATTTCTCA GTCTTATCAT ATATAGCACA ATGAGATTTC GCTTGAGTCT GCTTGTAAAT 8100

AAACGAAAAG AAAGATAAGA AATAATGAAA ATTGGTCAAC GAATTATGCG CTTTGGCATA 8160

AAAAATTAAG TATCGGAGTT GTATCTGTTG TAGTCGGCTT TGATTTCTAG CTCCAGCTGG 8220

AATTTCAGCC AATGAAGTAA AGCAAGATGT AACATCTGAA GTGGTAATAG GTGTGCTAGA 8280

TTCTAAGGAG GAATTGAAAG AGTCAGAAAA TGATGCTCCA AAACTAGAAA CTCCTCTTAG 8340

AGAGGAGCCA AGACTAGCTC CTCAAACGCT TCCGGAAGCA AGTGAAGTTC TTGAAAACAA 8400

AAGGGAAGAG TCAAAAGTAG AGATAACATA ACCAGCTCAA GCGGATGATA TCCGCAAGGT 8460

TGTTGGGGAA TTAGCCAAGG ATATAAGTAT TACTAAGTTG TATATGACAG GTCATTCTCT 8520

TGGATGTTAC CTAGCTCAGA TTGCAGCGGT TGAAGCTTAC CAAAAATATC CTGATTTTTA 8580

TAACCATGTA TTGAGGAAAG TGACAACTTT CAGTGCTCCT AAAGTGATTA CTTCCAGAAC 8640

TGTTTGGAAT GCTAAGAATG GTTTCTGGGA TGTTGGTTTG GAAAGTCGTA AATTAGCTGT 8700

TAGTGGAAAA ATTAAGCATT ATGTGGTTGA TAATGACAAT GTTGTGACTC CCTTGATTCA 8760

TAATAATCGT GATATTGTTA CATTTACAGG TAATTCACGC TTTAAACACC GTTCTCGTGG 8820

CTATTTTGAA AGTCCAATGA ATGATATTCC TAACTTTAAT ATTGGTAAAC AAGCTACCTT 8880

GGATAAACAT GGTTATCGTG ATCCGAAATT GGATAAAGTG CGATTCTTTA AGAAACAGGC 8940

TCTGCCTCGA TCTTCTAGTC AACCAAGCGC TGAACCAATG GAAAATATTG CCTCAGGAAA 9000

ACAGGTTACT CAAAGTTCGA CAGCTTTCGG AGGAGATGCT AGAAGAGCTG TGGATGGCAA 9060

AGTCGATGGT AACTATGGTC ACAATTCTGT CACTCATACA AACTTCCAAT CTAAGCCTTG 9120

GTGGCAAGTA GATTTGGCTA AAGAAGAAAC CATTCGCCAA ATCAATATTT ACAACCGAAC 9180

AGACACTGCC CAGGATAGAT TGGCAAACTT TGATGTCATT CTTTTAGACA GTTCTGGTAA 9240

AGAAATTGAG TGAAAACGTA TAACATCTCC TAAAGATGTG TCAGCACAAA TTACGATTAA 9300

CCATAAAAAA GCGCGCTATG TTCGGATTGA GCTAGAAGGC TATAATGCCC TCAGTCTTGC 9360

AGAAGTTGAA GTTTTCTGCT TTATAGCTAC GAATGCTGAA ACGGCGACAC AAGTTTCTAA 9420

GCCAGTTCAA CCAATCAGTC AGACTCCTGT GAAGGATAAA ACATTGACAA TTCAACACAG 9480

TGGAGCTTAC ATTGCCCGCT ACTCCATAAC TTGGGAAGAA GTTCCAGTAG ATAAAGATGG 9540

AAACCAAGTT GTTCGTAGTC ATTCTTGGGA AGGAAGCGGT CGCAACCAGA CTGCAGGTTT 9600

TGTCCTCAAC CTCCCAATCA AAGAAAATAT GAGAAATCTG CGAGTTAAGA TTGAGAAAAA 9660

GACGGGCCTA CTATGGAATA GATGGCAAAC AATCTATGAA AACAGACCAA TTTTAGCTCA 9720

ACCCCACCGT AAAATTACCC ATTGGGGTAC GACATTGAAT TCCAAGGTGA GTGACGATGA 9780

TGTCTTGTAA TCTGATGGTA GAATGACAGT TAGTTTGTCT AGTTTATAAG AAAGTACTAC 9840

CTGAGCTTGA ATAGGACTCA GGTAGCTCTC TATGAAAGAA CAAAATTAAT ACTCAATGAA 9900

AATCAAAGAG CAAACTAAGA AACTAGCCGC AGGTTGCTCA AAGCACTGCT TTGAGGTTGT 9960

AGATAAGACT GACGAAGTCA GTCACATATA TAATCCAAGG CGACGTTGAC GTGGTTTGAA 10020

GAGATTTTCG AAGAGTATAA ACAGAAAGGT AGAGCGCGTG TTCTAATTTG AACACGAGTA 10080

GAAAACTTTT CTAAAAACAA AAACGAAAGG ATGGGTAAAC TGTATTCGCT GAACTGAATA 10140

CGGGCGACTC TCCTCTAAAT CAAAATTAAG AAAGGAATTG ACCCCACCCT AAAAGTAGTG 10200

GGAAAAAGAT AGTTGATCTA GCGAGCATCG CTCACTGCGC CCAACTCCTA TTTTCCCTTC 10260

GCTTTTTGAT GGGTTTGGTA TCTTTCTCAA TATAAAATAT AAAATAAAGA AAGGTAGAGC 10320

GTGTGTTTTG ATTTGAACAC GAGCGGAAAA CTCGGAAAAT AGATAATCTG ACTGAAAAAT 10380

CAGGATTTCT CGTCAGGTTC CTAATTTTCA GTCGTTTTCT TCTCGCTCTT TGTATCATAA 10440

ATTATGTCTA TCCATATTGC TGCTCAGCAG GGTGAAATTG CTGATAAAAT TCTTCTTCCT 10500

GGGGATCCTC TTCGTGCTAA GTTTATTGCG GAGAATTTCC TTGATGATGC TGTTTGTTTT 10560

AACGAAGTGC GTAACATGTT TGGTTACACT GGTACTTACA AGGGTCACTG TGTATCTGTC 10620

ATGGGAACTG GGATGGGAAT GCCATCTATT TCGATTTATG CGCGTGAGTT AATCGTAGAC 10680

TACGGTGTGA AGAAATTGAT TCGTGTGGGA ACTGCAGGTT CTTTGAATGA AGAGGTTCAT 10740

GTTCGTGAAT TAGTTTTGGC GCAGGCGGCT GCAACCAACT CAAACATCGT TCGTAATGAC 10800

TGGCCACAGT ACGATTTTCC ACAAATTGCT AGCTTTGATT TGCTTGATAA AGCCTACCAT 10860

ATCGCCAAAA AACTTGGTAT GACTACTCAC GTTGGGAACG TTTTGTCATC TGATGTCTTT 10920

TACTCAAATT ACTTTGAAAA GAATATCGAG CTTGGTAAAT GGGGAGTCAA GGCTGTGGAA 10980

ATGGAAGCAG CAGCTCTTTA CTATCTTGCT GCCCAATACC ATGTTGATGC GCTAGCTATC 11040

ATGACCATCT CTGATAGCTT GGTCAATCCA GACGAAGACA CAACTGCAGA AGAACGTCAA 11100

AATACCTTCA CTGATATGAT GAAGGTTGGT TTGGAAACCT TGATTGCAGA ATAATTATAG 11160

CCAAAAAGGG GCTCTTTGTC AACTGTAGTG GGTTGAAAAA AAGCTAAGCT TGAGAAAGGA 11220

CAAATTTCGT CCTTTCTTTT TTGATATTCA GGGCGATAAA AATCCGTTTT TTGAAGTTTT 11280

CAAAGTTCCG AAAACCAAAG GCATTGCGCT TGATAAGTTT GATGAGATTA TTGGTCGCTT 11340

CCAGTTTGGC ATTAGAATAG TGTAGTTGAA GGGCGTTGAC GATTTTCTCT TTGTTCTTTA 11400

GAAAGGTTTT AAAGACAGTC TGAAAAAGAG GATGAACCTG CTTCAGATTG TCCTCAATGA 11460

GTCCGAAAAA TTTCTCAGGG TCTTTGTTCT GAAAGTGAAA AAGTAAGAGT TGATAGATCT 11520

GATAGTGGTG TTTCAAGTCT TCTGAATAGC TTAAAATCTT GTCAAGAATT TCTTTATTTG 11580

TTAAGTGCAT GCGAAAAGTA GGGCGATAAA AACGTTTATC GCTsArTTTA CGACTATCCT 11640

GTTGGATGAG TTTCCAGTAA CGCTTGATAG CCTTGTATTC ATGAGATTTT CGTTCAAACT 11700

GATTCATAAT TTGAACACGA AAACGACTCA TGGCACGGCT GAGATGTTGG ATAATATGGA 11760

AACGATCTAG AACGATTTTA GCACACGGAA AAAGCTGTTT AGCCAAGTCA TAGTAAGGAC 11820

TAAACATATC CATCGTAATG ATTTTCACTT GACAACGAAC GGCTCTATCG TAGCGAAGAA 11880

AGTGATTTCG GATGACAGCT TGTGTTCTGC CTTCAAGAAC AGTGATAATA TTAAGATTAT 11940

CAAAATCTTG CGCAATGAAA CTCATCTTTC CCTTAGTGAA GGCATACTCA TCCCAAGACA 12000

TAATCTTTGG AAGCCGAGAA AAATCATGCT CAAAGTGAAA GTCATTGAGC TTGCGAATGA 12060

CAGTTGAAGT TGAAATGGCC AGCTGATGGG CAATATCAGT CATAGAAATT TTTTCAATTA 12120

ACTTTTGAGC AATTTTTTGG TTGATGATAC GAGGGATTTG GTGATTTTTC TTTACCAGGG 12180

GAGTCTCAGC AACCATCATT TTTGAAsAGT GATAGCACTT GAAACGGCGT TTTCTAAGGA 12240

GAATTCTAGA AGGCATACCA GTTGTTTCGA GGTAAGGGAT CTTAGACGGT TTTTGAAAGT 12300

CATrTTTCTT CATTAGACTT CCACAATCAG GGCAAGATGG AGCCTCATAA TCCAGCTTAG 12360

CGATAATTTC TTTGTGGGTA TCCATATTGA TGATATCTAG AATCTTGATG TTTGGGTCTT 12420

TAATATCGAG CAGTTTTGTG ATAAAATGTA ATTGTTCCAT ATGATTCTTT CTAATGAGTT 12480

GTTTTGTCGC TTTTCATTAT AGGTCATATG GGACTTTTTT TCTACACAAA AATAGGCTCC 12540

ATAATATCTA TAGTGGATTT ACCCACTACA AATATTATAG AGCCCAAAAA GGAAGCCCTT 12600

TATGAATTGT AGGACTTCCT TTTCTTATCC AGAAATTGAT CTAGCTCTCT CTGATTTCGA 12660

AGAATAGTGA CTTTATGTGA ATATTCTTGG CAAAGTTTTT GGTAATTTTC TTTTTGAGTT 12720

TTGCGGACGC CCATCCCAAA GAATCCATCT GATAAACTCC CACTCAAAGC GTTCAGGGCA 12780

ATCTACCGCC ATACTTTCTC TGACTTTTCC ACGGTATTTA AGATAACGCT TAAAGGCTCT 12840

AAAGAGACAG GTCAATGGCG AAAAATTGAG AAAGATGATT TGGTCAGCTT CTTGCATTCG 12900

TTCTTGGTAG TAGCACCAAG AATAATTACC ATCGATGACC CAAGCTTTAT GCTTGGTGAG 12960

AAAGTTTTTT ATCTCGGTTA ACATCCATTC GCAGTCACTG TCTTGCCAAC CAGGTTGAAA 13020

TTGGAGTGTG TCCATGTGCA GTTTTGGAAT GGAGTAGTAG TTAGATAACT TTTCTGCTAT 13080

AGTTGACTTA CCAGAACCAG AATATCCGAT AATTGCGATT TTCATTTTCT ACCTTTTCCT 13140

ATTTGGAGAC AAAAAAACAG CCTCTATGGA CTGTTTCTTA TTTAACAAGT TTAGCTGAAA 13200

GACGAGCTTT ATCGCGGCTT GCTTTGTTTT TGTGAATCAA ACCTTTAGTT TCTGCTTTAT 13260

CGATAGCTGA GCTAGCAGCA CGGAAAAGTT CTTCAGATGG GTTTGCTTCG AAAGCTTTTA 13320

TAGCAGTACG CATAGCTGAT TTTTGAGCTG AGTTCTTTTC GATTCGTCTA ACGTTCAATT 13380

CAGCGCGTTT GATAGCTGAT TTAATGTTTG CCAATGGTCT TACCTCCATA TTTACTAACT 13440

(2) INFORMATION FOR SEQ ID NO: 129:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 8512 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 129:

CCTTTTTTCA AAAACTAGAT ACTAGTCTAT CAAAAGTAGG AAAGGGTTTC AAGAAAATTG 60

ATTGGAAATT TTTTGAAAAT CATAGAACTA TTAGCTAATC CCTAGTATTG AAAAGACTGG 120

ATAGCTTCTT TCAGGTCATC TTGTAAACTA TTTCTCTGGT CAAGTTGGAC ATAGACTTCC 180

ACCAGACAGG ATCTAAAGTT GGAAAATTTG TAAAAATCCT CCCTTTCTTC TATCGGAAAA 240

TCAACAGTTT TTATCCAAGA AGCTACTTGT TCTTGCTCCA ACTTCCCTTG TAAAATAGGT 300

TCATAGATCA CTCTTGCTAA ACGCCAATCC TCATCATCTG TAAAGCGAAT CGACATTCTT 360

TTAAATAGTT GGCCAAGTAT ATCAAATACT TCATGAACTC TGTTTTTAGG AAAGTCTGGA 420

TGACAAACCA CCTCTGTCAG TAAATCGGCT CCATGTGCAA AAGCGTGAAC CCAACCATAC 480

TGACTTGAGA AACCCCTTGT ATCCTTTTCT TTTGAAAGAT AGTGCAAGCC TTGATTTAAA 540

AGGACATTAC GAATTTCTGG AGAAGGATTT CCCAAATGAT CAAACAACCA CTGGATTTCT 600

TCCTGGTTAT AATTTGGTTT TTCTTCTGCT ATTTTTCTTA GTAAATCTTG ATACATGGTC 660

AATACCTCTA CATTTCTAGC AACTGTTCAA AAAGGCAGTC TTAAATGACT CAATATTGAA 720

TTCTCAATTA AATACAATCT GATATAAAAT GACGTAAATA ACTATCAATA CCAGTTCTAC 780

AGTAAGTTCA AATTTAACAT CACGACCTTC AACGACATTT TTGAAAATAG CTACAACTAA 840

GACAAATAGA ATGACGCTTA ACAAGCCCAT AAACATCATT CTAAAAAATT TTTCTATTCC 900

CCTACTCTCC CAACTCAGCA CTATAGGAGA TAATCTGGTC AACTGTGTCA GACAAGAATT 960

GGATGGTATC ACGGAGTGGT TTGTCTGTTG AAATATCAGC ACCGATAATC ATGGCTGACT 1020

CAAGTGGTGT CTTGCTACCA CCTGATTTGA GGAGATTGAG CCAGTCTTCA GCTCCAGTTT 1080

CAGAATGTTT TAGATGAAGG TAACCAGCAG TCGAGATAAC TAGTCCTGCT GAGTAAGTGT 1140

AACTATACAA GCCCATATAG TAGTGAGCTT GGCGCATCCA AGTCAGAGTT GCATCATCGT 1200

CAATTTCAAT AGCATCTCCC CAGAAATCCG TCAAAACTTC CTTCATAATG CTGTTGAGCT 1260

TGCTTGCTCC AAAGGTCTCC CCTTCTTCAA TCAATGTATA CACCTTACGC TGGAAGGCGG 1320

CTTCCAAGAG GTGGGTGATA AAGTTATGGA AGTAGGTGTC TGTCAAGCGA TGAGCCAGAG 1380

CGAAGCGTTT TTGACGTGGG TCATTAGACT GGTTCTCCAA GTAATCACTG AGTAGCAATT 1440

CATTGAAGGT TGACGGTGCT TCAACATAGT AGGTCGACAT ATGGGCATTG AAGTAACTTT 1500

GATGATTGTC TGAAAAGATG AATTGACCAG AATGCCCGAT TTCATGAATC AAGGTATAGA 1560

CATCGCTCAA ACGGCCTGTC CAGCTCATGA GTACATAAGG GTGTACGCGA TATGGGTCCG 1620

CCGCATAACC ACCGGAATCC TTGCCACTGT TAGCAGCAAA GTCCACCCAG CGCTCTTCTT 1680

GGTAACGAGC AACTTCCTGA CAATATTCTT GCCCCAAAGG TTCTACCGAC TTCATGACCA 1740

AATCATAGGC ATCGTCAATA GTCACTTCAG GATTCAGGGC GCTGTCCAAG TCCAATTTCC 1800

AGTCTGCAAA GGTCATCTTT TCAAGACCAT TTACCTTGGC AACATGCTTG AGGTATCTCT 1860

GAGCGACTGG TGCAAAGTCC TTCATGATGA GGTCAATCTG GCGGTCAAAC ATGACACGGT 1920

CCACTTCTTG TTCAGCTAGA AGATAGTCAA AGACAGAGTC GTATCCCTTC ATATCAGCCA 1980

AGAGTTTTTC AGACTTGACC TGAGCCAGAT AGGCTGCTGC AGCCGTATTT TGGTGCTTAC 2040

GAAGTCCCTC TGAGAAGGAA CGGAAGGATT TCTCACGAAC CTCAGCATCC TCATGGTTTT 2100

GGTAGAAATT CTCATAGGTC ACAAAGCTGT TTTTGTAGGT CTTGCCATGG GCTTCAAAGT 2160

CAGCCATTTC AAAATCCCCA GCTCGCATCT TAGTATAAAT GTCCTGCGGA CTGTAGAAAA 2220

CTTCACCGAG ATTTGTCAAG GCCTTCTCCA CATCTGCCCC TAAGTAGTGG GCTTTTTTGA 2280

TTTTAGCCTG ACGAATGGCA GCTGTTAAAT GTGGCAATTT ACCCAAACGG TCCAAGACTT 2340

CCTCATCTGC TGCCACCAAG GCATCGTCAA AGAAGGTCAA GGCTACGCTG GCATCTGTTT 2400

CAAATTCCAT CCCAGCTTGG GCAATATTGG CAAATTCGTC ATTGCTATAG TCCGTCGTCT 2460

GAGGCATAAA ACCATAGTTG CCAATATGGC TCATCTGAAT GTAGATCTGT TCCAATTCCG 2520

CAAAGGCCTT CTCGAAATCC TCAAAAGTGT GAAGATTGCC CTTGTAATCA CGGCTAAACT 2580

GGTTGATGTC TTCGCGAGCT TTCTCGATTG CACGCAAGAA ATCCTCACGG TCTTGGTATA 2640

GGGCTGTTAA GTCCCAGAGT TCCTTCTCTG GAAATTCTGA ACGGTGTTTT TGTTCCATTT 2700

TCTTCCTCTT ATTTCTCTAA TTCTACTAAA ACACTAAGGG CTGATAAAGC GTAAAGCGGT 2760

GCTGTTTCTG CTCGCAAAAT ACGAGGACCT AGGCCTGCCA AAACGGCTCC TTTAGCTTCA 2820

AAACTTTCGA TTTCTGCAGG TGAGAGACCG CCTTCTGGAC CAAAGATAAA GAGCAGTTTG 2880

GCTCCTGTTT CAAGACCAGT GACTGCTTGC AGAAGCGCAG CGGCTTCTCC TTCTTTAGCT 2940

GATTCTTCAT AGGCTACTAT GATAGAGTCA AACTGGTCCA GCTGAGCTAG AAAATCTGCT 3000

TTTTTCTCGA AAAGTTTAAT ACTTGGTACA ATATTACGCT TGCTTTGCTC GGCTGCTCCA 3060

AGGGCAATTT TTTCTAGTTT TTCAACTTTT TTACCCAATT TCTTGCCATC CCACTTGGCA 3120

ACTGACCAGT CTGCAGGAAA GGCCCAGATT TGGCTAGCCC CCAGTTCGGT TACTTTTTGA 3180

GCGATGAACT CCAGCTTGTC TCCCTTGGGA AATCCAGATG CGATGGTCAC TTGGACTGGT 3240

AGTTCCACAT TGTCATTTAA TTCTTGGACC AACTCAAACT GACGATTTTC CATATCCAGC 3300

ACGCGCGCCA AGCGCTTGAT GCCATCATCA AAGACTAAGG TAACCTCATC CTCTTCTTTC 3360

AAGCGCATAA CCTGAAACAT ATGCTTACTG GTTTCCTTGT CCTCGATAGT GACAGGAGAG 3420

ATAGCACTGC CTTTTACAAA ATACTGCTGC ATGCTAGCCT CCAATCACAC CAGAGATATC 3480

CTTGGTTTTC TTAAAGACAC AGGTATTCCA TTCCCCTTGA ACCATGTGAG TTTCGAGGAA 3540

AAATCCAGCT GACTCAGCCG ACTGGCGCAC CATGTCCAAC TTGTCCTTGA TAATGCCACT 3600

CATGATCAGG TAGCCTTCAT CCTTTACCAA GCGATAAGCA TCGTCTATTA GATGAATGAG 3660

GATATCCGCC AAGATATTAG CCACAATCAC ATCTGCCTCA ATTTCCACAC CCTTAAGCAA 3720

ATCTCCAGCC GCTACATGGA TATTTTCCAT GCCAGGGTTG AGCTCAATAT TTTCCTGAGC 3780

CACACGAACC GCCACATCAT CCAGGTCATA GGCGAAAATT TCTTTAGCCC CCAGAAGCGA 3840

GCTGGCAATA GAGAGAACCC CTGAACCAGT CCCCACATCT AGCACCGTTT CGCCACCACG 3900

AAGAACCTGT TCCAAGGCAA AAAGGCTCAT CTTGGTAGTT GGGTGGGTTC CAGTACCAAA 3960

AGCCATGCCA GGATCCAGCT TGATAATCAT TTCCCCCGCA GTCGCCTCAT AGTCTGTCCA 4020

AGAGGGAACG ATGGTCAAAT CATGAGTGAT ACGAGCAGGT TCATAGTATT TCTTCCAGTT 4080

GTCTGCCCAG TCTTCCTCAG CCAAGGCAGT CGTACCTATT TTTAACTCTC CCAAATCCAT 4140

AAAATCTGTC AATTCTGCTA GACGAGCCTG CAAATCCGCC TCAACCACTG TCACATCCAC 4200

CGTGTCAGGG TAGTAGGCTG TCACTACGAT TTCTTCTTGC TGCTCCACCT CTGGGAAAAT 4260

CTCTCCAAAG CGGTCCACAT TTCCCACATA GTCCATACTG TCTTCGATTG CGACTCCTTG 4320

CGCTCCCAGC TCAATCAAGA GATTGGAAAC CAACTCCTCT CCCTCACGCT TCACTGTAAC 4380

TTTTAACTCT TGCCATGTTT CCATTATTAA TACCAAGCCC GTAAAACACA AAACCAAAAT 4440

AGGAAATTCT CTGAAGACGC TTGTGTCTAA GAGAAGTTTA TCTTTTTGGC ACAGTGTTTA 4500

GGGCGGGTTC AGTTTAGAAA TGTAACTGAA CCATCCTTTC TAATCACTTA CTTTTAAATA 4560

ATCTTTTAAT CTCTCTTGCA ACTGAGGCAC AACTTGACTG GAACTAAGAA ATTCCTCAAC 4620

ATTCATCAGC TGATAGCCCT GTCCTTCATC TCCGAAGATG ATATTGTCAA ATTGTTCTTG 4680

TCTTAGCTGA CCAACCATAA AGACCGATTT CTTGCCTTTA AAAATTACGC TAGGATAAAT 4740

CTTGCTCCAA AGCAGACAGT CTTCATCTAA ATGAATTCCC AGTTCCTCAT AAACTTCACG 4800

CCGAGCGCAT TCAAAAGGGC TTTCGTCCCC TTCACGGCCA CCACCTGGCA GTTCCCACAT 4860

ATTGGCCCAG GGAATACTTG CCTTATCATC GCGTAAGATA GTCAAAAGCT TATCCCCACA 4920

AAACAAAGCA ATCTTGCAAC CTGTGAAATC AGAAATTTCT AGTTCCATCT TCAGTTCCTT 4980

CTAACATTTC CTTTTCCAGC TCGGCTAACC AGTTTTCATA ATATCTTTTC TCATCCCTCA 5040

ACATTCGACT ACTATCCATT TTCTGTCTAG CAATCTTGAG AGCCTTACGA GTTCGATCTA 5100

CATCTTTCTT CACCTTTAAT TGATACCAGG CTTGTATCAC TTGAAGATTG GACAGTTTGA 5160

GAGACAGAAA CGATTTGACC TGTCGAATAC TAGCATATTG CTCCGCTTGC TCAAAATCTC 5220

CTTCCAACAA GGCGATATGA AGCAGGGATA GTTGGGCAAC TGTCTGCATC ATCGGAGTAG 5280

TTGTCCTCTC AAGTAATGCT TGAAACTGCT GTTTAGCTAC TTCTTCCTTC CCTTCCAAAA 5340

TGGAAACTTC ACCTTGCATA CCTAATACAC CATCCGCAAA ACTCCCTCGT GCATCCTCAG 5400

GAACTGCTTG AACAAAGTCT TTCAAATCAT ATTCTTGAGG AGCTAGCAAG GTCTGGGCAG 5460

AATGTCTCAA TACCAGGTAG GCGTATTTGG TATTTTCAGG GTGTTGTAGT AATTCCCAAA 5520

TTTTTGCTCC ATCGGTGATG TCGACTGGCA AAATGTTATT TAGGAAGAAA GATAAATTAA 5580

GAAAAATCCA AGTCCCTGCA AAATACCAGC TTCTTGTCAA AAATCCAAAC AATATCGCCA 5640

ATAATATCAA GCCGAGATGA ACCATCAAGC CTCCTGAAAG CATCAGGATG ATTCTTTGAT 5700

CGCTTTCATC CTCTTTTAAA CCAATGTATT GAGCACCAAC ATTTTTCAGA ATGGCTGTTC 5760

TACTAAGATG AAACCTGCCT GACTTTTTGG TCAAAATAAA ATGTCCTAAT CCAAAAGCCA 5820

CCAGCCGATA GCCTGTCAAG TAGCCACAAA AAGCATGACC CAGCTCATGA AGAATAAAGA 5880

TTAAATACAT GCTTAGAAGA GCGAAGGCAT AACCAAAAGT AAAGGCTAAA ACTGCGGAAT 5940

ACCCCAACTC TGCAAATGCG ATTGTTCCAC AAGCAAAAGC TAGCATAATA AAGACAACAG 6000

CTAGCACATA AACCAAATAA GTCCCAATTT TCTTCATAAC ACCTCCAACC AACTCCTAGT 6060

ATCTTGGATA AGGATAAAAT TCTCCCTTTT CCAAGCCAAT TTTTCCTTCT TCAAAGACTT 6120

CTTGGTTCCA TTCCATGACA AATTCCTCTG CTTCTGGGTC TTCCAAAAAG TCCATGAGGA 6180

CATCTAGCCC AACCTCAGCA GTATCTTTAA GGAAAAGCGC AAAATAAGCT AAAAATTCAC 6240

GGGAAAATCC TTTTTTAGGC AGGTAAGGAA TAACAGTCAA ATAGTCTTCC TCATTGACTG 6300

TTGACTTGGC AGGATTGTAG AAAAGGACCG CTTCCTCAAA AAGAATGTCA TCTGATGAAA 6360

CCTCTCCGTC TTCATCCACC ATCTCCACAC CGCAGCATTT TGCGCTTCCA ATAGAAAACT 6420

CACTTCTACC GCATGGTTGC GTTTGTCCCA GCTAATCTCA AAGTCAAAGG GAAAGTTCTT 6480

GTCCAACTCT TCCTCTAAAA TATCTAAAAA TCCGTATGTT GCCATTTTGT CCTCTTTCTA 6540

TGCGACTCTT TAATCGCCCC GATTGCTCGG AAATATGCTA AAATAGATAC TACCATCTTA 6600

CCACAAAATT ATTTTATGTC CTAATTATAC CATATTACCT CATTTAAACC CTTGGTATCA 6660

GTGATTTTCT TAAAAGTCTG ATTTCTTCAT TTCTCATAAA AATCAATATA AAAAGCCCTC 6720

GAAAGGGCTA ATAAATCTAT AAAATCAATA GGCGAGTAAC TAGCACAAGT GGACGTGCTT 6780

TTTTATTGAC TATTACCACG ATACCACGCT TAATCTTAGG CTTGAACTTT CTTATCTGCA 6840

ATAGCGTCTG TCAAAGTCTG AGAAAAGTTA AGCCCCATTT CTCGTCCCAA CTTATCTGCC 6900

CATTTTGGTA TGGTCAAAGT CTTTTTAATG GGTTCCTGAC TTCCTAGGTA TTCTGATACA 6960

TCAACAGATA CCATAGAAAT AAAAGATTTA TCAAGGTCAT AGGTTGACAC GAAATCTTCA 7020

TCATCTTTAA AAGGATCATT ATCAATTAAA GACAAGCTAT TGATATCTGA TGGCTGAGGT 7080

AACTCTCCAT CACTCTCTAT CAAATCTGCA ACAGTTATCC CTAGCCACTC CGACCCCATA 7140

GCCAAAGCCT CAGAAATCCC CTCTCCTTGT GTAGCTGAGT ATTCAAAATC TGGGAAATGG 7200

ACAAAATAAG TCGCTTCTGT TCCGTCTGTG TCGTCATAAT AAAATAAAGC TGGATACGTA 7260

ACTAACATTT CACTACCTCC ATATCAAAAA GCAGGGACTG AATTTTACAA CCCAGCTTGC 7320

TTTCTTATCC CTCTTTCAGT GTACTTATTC AGCTCACCAT GAAGGATTGT GATAGGTCTT 7380

TCCCCTTGCT TTTCCATTTT AATATGGGAG CCTTTACCGC CTCTAGTCTT TATCCAACCA 7440

TGGGCCGTAA GGAGTTTAAC CATCTCTTTT TGTGTCATAG GCATAGCGCT TTTACCTCCT 7500

GACAACACCA TTATAACACG TGTTACACGT ATTGTAAAGG AGTGATACTT ATTATTCTAT 7560

TATACATAAA AGCCCCTAGA TGTGGTTCTA AGGGAAGCCA ATTTATTCAT ACCTATTTTT 7620

CTAATGAGTA GTAAAAACTG CTTCTTTATC GAGCAATTCA TCATCTGTAT AGTCAATTGT 7680

AAAAGTATCT CGATCTAAGA CAGATTGAGG CGGAGTTGAA TGAATCATAG GAACACTGCG 7740

TACTCTATAT TTTTTATCTC CAATTTTTAC AAACTGATAC TCTTCGAAAA TCAAATTCAA 7800

ACCACGTCAA CGTCGCCTTA CCGTACTCAA GTACAGcCTG CGGCTAGTTT CCTAGTTTGC 7860

TCTTTGATTT TCATTGAGTA TGATTAACTC TCAAGTCTTC GAAATCAGGA TTTTCAACAG 7920

TTATTACAAG GAGGCGATTT ACTACTTCAA AAACATCAAT TATTCTATTT TTCATATTTT 7980

TTCAACCCAT TATTAGAATG AACTTCTTGG TAAGCAAAAT CAAGTTTAGA TTTAATGTTT 8040

TCGTACAAAT CTAAAATCTC TTTTGGAGTA TCTTCCCGGA AGAAAAGTTT TCTTTTCCCT 8100

GAAATAACTT GATCACTAAG AATCCAATGA CGAATTTGTT TTGTAAAAAT CAAAATTTCC 8160

TGACTTGGTA GTTCCATCAT TTCCATTGCT TATCACCTCT CTTTTCATTA TAGTTCATAC 8220

AATGACATTC AGCAATATTA TTTCTCAAGT CAGCACTTCC ACTTCTTTAG GCTCAACTAT 8280

CCTATTTTGA GCTTTAAGGA AAATCAAATC TCTCATGCTG ATACCTCTCC TCATTAAATT 8340

AAATAGTAAA AAAGATTCTA TCTCACTCCC TGATTATTAC AAAACCATTG AAATATCACA 8400

ACTAATAGGC TAGAATGGAC ATAGTAAGAT ATAGTAGATG AGTCATTCTA CTCAAATCCA 8460

CGTTAGAAAG GACTGCTATG CCAGACAATC TCGCCGTTCG CATGCGCCCn GG 8512

(2) INFORMATION FOR SEQ ID NO: 130:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 2869 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 130:

CTCGTTTCAA GGTTGAGTCT CTTGCAAATC TTGTTCGCGT TCTTCCTTTT GCCAAGGCAT 60

CTCTCCCATG GTTGGTGCcA GCCATTGTTG GAATCTTGCT CTCATTGGTT CTACCAAACA 120

AGCAAGAAAG CGATGTTTTT GAAATGGAAT AATCACTTAA ATCACTTTTG TAGCCAAGTC 180

TACAGGAGTG ATTkTCTTTT TTTATCCGAT GATAAATGTG TTATAATAGG TAGCGAAAGA 240

GGTGAAGAAA TGAATCAAAC AGTAGAATAT ATCAAAGAAC TGACAGCCAT TGCGtCGCCA 300

ACAGGCTTTA CTCGTGAGAT TGCGGACTAT TTAGTCAAGA CTCTAGAAGG TTTTGGTTAC 360

CAGCCGGTTC GCACATCCAA GGGCGGTGTC AATGTAACTA TTAAAGGTCA AAATGATGAG 420

CAACATCGCT ATGTGACTGC CCATGTAGAT ACGCTTGGTG CTATTGTCCG TGCTGTCAAA 480

CCAGACGGCC GTCTCAAAAT GGACCGTATC GGTGGCTTTC CTTGGAACAT GATTGAAGGA 540

GAAAACTGTA CCATTCATGT GGCTAGCACA GGTGAAAAAG TATCAGGAAC CATCCTCATC 600

CACCAAACTT CTTGCCATGT CTATAAGGAT GCAGGAACTG CAGAACGCAC GCAAGACAAT 660

ATGGAAGTGC GTTTGGACGC CAAAGTAACT AGTGAAAAAG AAACTCGTGC TCTTGGCATT 720

GAGGTCGGTG ATTTTATCAG TTTTGACCCA CGAACTGTCG TGACAGAGAC AGGTTTTATC 780

AAGTCTCGCC ATTTGGATGA CAAGGTCAGT GCGGCGATTT TGCTCAATCT CCTTCGCATT 840

TATAAGGAAG AGAAGATTGA ATTGCCCGTA ACAACTCATT TTGCTTTTTC AGTCTTTGAA 900

GAAGTGGGAC ACGGTGCAAA CTCTAACATT CCTGCTCAGG TAGTAGAATA TCTGGCTGTG 960

GATATGGGAG CCATGGGAGA TGACCAGCAA ACAGACGAAT ATACAGTGTC TATCTGTGTC 1020

AAGGATGCTT CTGGACCTTA TCACTATGAC TTCCGTCAAC ATTTGGTGGC TTTGGCGAAA 1080

GAGCAAGATA TTCCATTTAA GCTGGATATC TATCCATTTT ATGGTTCGGA CGCTTCAGCG 1140

GCTATGTCTG CAGGGGCAGA AGTCAAACAC GCCCTTCTCG GTGCTGGTAT AGAGTCTAGC 1200

CATTCCTATG AGCGTACCCA TATTGACTCG GTGATCGCAA CAGAACGAAT GGTCGATGCT 1260

TATCTTAAGA GCACGTTGGT GGACTAATAT GTGCCTTATT TGTCAGAGAA TTGACCTCAT 1320

CAAGAAGGAA GAAAATCCTT ACTTTGTCAA AGAGTTGGAA ACAGGCTATC TTGTGGTTGG 1380

AGACCACCAG TATTTTGAAG GCTATAGTCT CTTTCTAGCC AAGGAGCATG TCAGCGAATT 1440

GCACCATTTG AAAAAGGAGA CAAGACTCCG TTTTCTAGAA GAAATGAGTT TAGTCCAAGA 1500

GGCAGTTGCC AAGGCCTTTG CTGCTGAGAA AATGAATATC GAACTGCTAG GAAATGGCGA 1560

TGCTCATCTT CATTGGCATC TGTTTCCACG ACGGACAGGT GATATGAATG GTCATGGTCT 1620

CAAGGGTCGT GGACCAGTCT GGTGGGTTCC CTTTGAAGAA ATGACAGCAG AAACCTGCCA 1680

AGCAAAACCG GATGAGATTA AAAGATTAGT CAAACGTTTA TCGTCAGAAG TAGATAAACT 1740

ATTAGAAATA AAGGAGTAGA AATGAAGAAA AGATACCTAG TCTTGACAGC TTTGCTAGCC 1800

TTGAGTCTAG CAGCTTGTTC ACAAGAAAAA ACAAAAAATG AAGATGGAGA AACTAAGACA 1860

GAACAGACAG CCAAAGCTGA TGGAACAGTC GGTAGTAAGT CTCAAGGAGC TGCCCAGAAG 1920

AAAGCAGAAG TGGTCAATAA AGGTGATTAC TACAGCATTC AAGGGAAATA CGATGAAATC 1980

ATCGTAGCCA ACAAACACTA TCCATTGTCT AAAGACTATA ATCCAGGGGA AAATCCAACA 2040

GCCAAGGCAG AGTTGGTCAA ACTCATCAAA GCGATGCAAG AGGCAGGTTT CCCTATTAGT 2100

GATCATTACA GTGGTTTTAG AAGTTATGAA ACTCAGACCA AGCTCTATCA AGATTATGTC 2160

AACCAAGATG GAAAGGCAGC AGCTGACCGT TACTCTGCCC GTCCTGGCTA TAGCGAACAC 2220

CAGACAGGCT TGGCCTTTGA TGTGATTGGG ACTGATGGTG ATTTGGTGAC AGAAGAAAAA 2280

GCAGCCCAAT GGCTCTTGGA TCATGCAGCT GATTATGGCT TTGTTGTCCG TTATCTCAAA 2340

GGCAAGGAAA AGGAAACAGG CTATATGGCT GAAGAATGGC ACCTGCGTTA TGTAGGAAAA 2400

GAAGCTAAAG AAATTGCTGC AAGTGGTCTC AGTTTGGAAG AATACTATGG CTTTGAAGGC 2460

GGAGACTACG TCGATTAATA CTCTTCGAAA ATCTCTTCAA ACCACGTCAG CGTCGCCTTA 2520

CCTACTGACT GCGTCGGTTC TATTCACAAC CTCAAAACAG TGTTTTGAGT cGATTCGTCA 2580

GTTTTATCTG CAACCTCAAA GCTGTACTTT GAGCAstGCG GCTAGCTTCC TAGTTTGCTC 2640

TTTGATTTTC ATTGAGTACA AAAAGTAAAC TTTTCTCTTG CAATTCCAGA TAAATAGTGT 2700

ATAATGGATG GGTATGTGAA AAACATACTT GTGGGAGGTA AAAATCTCTA ATTACCGCCA 2760

AAACCACAAA GGAGGATTTA AAAATGGCTA AAAAAGTCGA AAAACTTGTA AAATTGCAAA 2820

TCCCTGCTGG TAAAGCTACA CCAGCTCCAC CGGTTGGACC TGCTCTTGG 2869

(2) INFORMATION FOR SEQ ID NO: 131:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 6186 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 131:

CTGAATCCCT TATAGGAGTC CAGTAACTTT TTAGCCTCTA CTTTGCCTTC ATAGGCAGCT 60

TCAACATCAT TAAAAAAAGA ArGCACTGAA GCAAGTTCTT CAGTGCTCCA CGACAAATCT 120

AGTGGGTAAC TATACTGTTT GTTCATTAAC TAATACCAGC TCTCATTCTT GCTTCTTTTA 180

GTTCTTGCTT ACGATAACTA CGAGGGAGAA AAGCACGAAT CTCATCTTCA TTAAAACCGA 240

TTTGCATACG CTTGGCATCA ATAATAATTG GACGACGCAA AAGACTAGGA TACTGCTCAA 300

TCAAATGAAG CAATTCCGAT ACCGAAATAC TCTCTACATC AATATTCAAT TTTTGAAAAA 360

TTTTTGAACG AGTTGAAATG ATGTCATCAG TACCATTTTC GGTCAAGGAA AGGATGTGTT 420

GCAATTCTTT TCTTGTTAAA GGACTGGTCA TAATATTGTG TTCCACAAAG GGAACTTATG 480

TTTTTCTAAC CAGGCCTTAG CCTTACGACA TGATGTACAG CTCGGTGATA GAAATAGTGT 540

AATCATGCTT TTCTCTTCTT ATCTATACTT TGCTACTTCT ATTATACAAA AAAATAAAGC 600

GCTTGACTAG GGATTTTTAG AAAAAAAGCC TATTTTTTCA AGAAAAATAG GCTTTTTGCG 660

AACGATTGAC ACAATTGGAT TTGGTTAATT CACTCTTAAC GATGGTTTTA AACGATATAT 720

ATTTTTATAT ATGTAAATTA AAAACATCTT TCCTTTCACT TCCTACGACT TTTCAGATAC 780

AGATAGCCAA AGAAGTTTTC ATAGAGGGCA AAAAAGAGGA GGAAGGCATG AAGAAAGAAG 840

GTCTCTGGCA AAATCATAAT AACAGGATCC TTGGCTGGAT CAAAAAGCCA GGTATCATCT 900

CCCACAAAGA GAATTTGATG GAAAAGAGTA AAGAATTGGT CAAAACCAAT CAAAACTCCC 960

CCAAGTCCAA TCATCACAGG TAAGACTACT AGAGCCAGGA GACTTTTTCG ATAAAGAGAC 1020

AAAAAGTCCT TTTTCACAAT CCTATTGACA AAGACATAGA AACTTGGCAG TGTCACTAGA 1080

GCTACTAGCT GAACCAAATG AAAGAGATTC TTGACCACTG CGAAATGGTG CAGACCAGCT 1140

GCTGACGAAC GAAAATCAGG CATCTGTAAG ACCTGACTAA AAGGATTGGT CAGATAATTC 1200

ATCAAGATAT GAAAATTGTA TTGAATGGTT TCTGGTTTTA GATAGACTCG ATTCGTTAAG 1260

TTTAGCCACT GAATCTCCAT AGGATAGAAA ATCCAAGCCA GATAAATGGT CAGAAGGATG 1320

GAGAGGGAGA GGAGAAAGAG CATAGAGCCC CAAAAGATCA ATTTAGTTTT CATCAAAATC 1380

CCACTCCGCA AGGCTAGAAA CCACATGTGT CGGTGCGATT GGCAGGCCAG CTACTTCTTC 1440

TGCCTTAGTA AAACCTGTCG TCACCAAGAG CGTTGGAATG CCATTGTCAA TCCCAGCCCG 1500

AATATCAGTC AAATAATTGT CCCCAACCAT GATTAACTCT TCACGTTCCA AACCTAAGTG 1560

CTCAACCGCC TTGTCCATAA TGATGGCATT TGGTTTTCCG ATATAAACCG GCTTCACTCG 1620

TGTCGCTACT TCAAGCAGCG TAATCAGTGA GCCAGCACCT GGCAAAAGAC CGCGTTCCGT 1680

CGGGATGTTG AGGTCAGGAT TGGTTCCGAT AAAATGGGCA CCCTTTTGAA TAGCAAGAGT 1740

TGCTGTGGCA AATTTTTCAT AGTCGACTTG CCAATCCAGA CCAACTACCA CGTAGGCAGG 1800

TTTTTCCTTG TCTTCCACAT AACCAGCCGC CTTGATGGCT TCCTTGAGTC CTGCTTCTCC 1860

GACGACATAG ACGGTCTTTT CAAGCCCCAA ATCATTCATA TAGTCGATGG TTGCCAAAGT 1920

CGCTGTGTAG ACAGTCGATA GGGGCGTATC GATATTAAAA TTCTGAGCCA ACATCTCCTT 1980

AACACTCTCT GGAGTGCGGG TTGTATTGTT GGTTACAAAG AGATAGGGAA TGTCCCGCTT 2040

TTGCAATTCA TGAACAAAAG TCTCTCCAGC AGGGATTCGG TCTTTCCCCT TATAAATGGT 2100

TCCGTCTAAA TCAATTAAAT AGCCTTTATA TTTCATCTAT TTCTCCCTAA GCCTTTTTTA 2160

TTTCTTGCCA AGTAATGATT GCTTGGGCAT TGATAACCCC ATCACTTGTA ATTTCATGCT 2220

TGCTTTCCAG TCCAGTCCGT TCAACAGCCG ATGTAATCAC CCCACCTGGT CGAACTTCCT 2280

TGACATACTT GAGGTTGATT TTCTTGGGAA TATAGTGGGT CAAAAAATCC GCTCCCATGA 2340

CCTCAAAAAT CCAGTCCAAG TATTTACTGT TATTGACATG ACCATTCATA TCCAAGTCGT 2400

AAAAACGAAC ATGGTAATCC TTGCTGATCG GTTCTTCCAA GGACTCATAC TTCGGTCCAC 2460

GGATAAGTTT TTTATCAAAA TCAGACTGGT AAGGAGCCAC AATCTCAGGT TCAACAACAT 2520

GGACTTTTCG ACTGTCGCGG TCCATGAGAA CAAAGGTCGC CATCATGTGG ATGAGCTCCT 2580

GCTCCGCTTC ATTATAAATA GTAAAGCGAC GGTAGCAAAA AAGTCGATTG TAGCTCAAGG 2640

CTTCCGTTTC GATGGTAATT TCTTCCGCAA AACGAGGCAA ACGAACCACC TCAATATCAT 2700

ATTCTACGAT AATCCAGACC AGATTATATT CTTCCAAAAT GGCCTTATCA CTAACTCCCA 2760

GTTCAATCGA CTGCATCCCT GAAACTTGCA GTGACAGCAA AATCACATCT GGAAGTTTGA 2820

TATGACCGTT CATATCAGCC ATATCAAAAG GAATTTTCAT TTTCATTTGA TAAGTTAAGC 2880

CCATGATCCT ACTCCAAAAT AAATCGTTCT GCTACAGTAT CTCCCAAAAA GAGACCTCTC 2940

TTTGTCATGC GAACGTGGTC ACCCTCAATC TGCATGAGGC CTTGTTGAAC CAAATCTCTG 3000

ACAATTTCTC CATAAAGTCC AGCAAAAGAC TGTCCAAATT TTTCCTCAAA TCGCGCCATG 3060

GAAACCCCGG ATTTCTTGCG GAGTCCCAAG AACATTTCTT CTTCCATTTG CTCCTTTTGA 3120

CTCAGGTGAT CTTCTGTAAT ACAAGCATTG CCTTCCTCAA CCGCACTGAG ATAATGACGA 3180

ATGGGACCAT GATTTTTATA GCGTACTCCA TTGACATAAC CAGATGCCCC TGCACCAATA 3240

CCATAGTATT CAGCATTGTC CCAGTACATG AGATTATGAC GACTTTCAAA ACCGGGTTTG 3300

GAGAAATTAG AAATCTCATA ATGCTCAAAA CCCGCTCGCT CCAGCTCTGC AATGATGTAC 3360

TCAAACATCT CCGCTTCTAG TTCCTCCTTA GGCAGAGGCA ATTTCCCACG TCGCATCCGG 3420

TTCATAAAGA CCGTATGGTT TTCTAAAATC AAACTATACA AACTCATGTG GGGAATATCC 3480

AATCCAATGG CTTTAGCCAC ATTTTCCTTT ACTTGCTCCA TGGTCTGACC AGGCAGAGCA 3540

TAAATCAAAT CAATGGAGAT ATTGTCAAAA CCAGCCAGTT TCAGGCGATC GATATTTTCA 3600

TAAATATCCT TCTCCAAATG ACTGCGCCCA ATCTTTTTCA ACATCTTATC ATCAAAGGTC 3660

TGGACACCTA GCGAAACACG ATTGACAGCC GAATTTTTCA AAACAGCTAT CTTATCCGCA 3720

TCCAAATCGC CTGGATTGGC TTCAATGGTC AACTCTTCCA AGACAGACAA ATCCAAGTTT 3780

TTAGTCAAGC CATTCAGTAA CACCTCCAGT TGCGGAGCCG ACAGGGCTGT CGgTGTTCCA 3840

CCACCGATAT AAAGGGTTGA CAACTTTTCA ATATCATAAG AACGAAACTC TTCCAGCAGA 3900

TGCTCTAAAT AGCTGTCGAC TGGCTGATTT TTGATGAAGA CCTTTGAAAA ATCACAATAA 3960

TAACAAATCT GGGTACAAAA TGGGATGTGC ACATAGGCTG ACGTTGGTTT TTTCTGCATA 4020

GTAATTATTA TACCACAAAG ACTAGATTCC AGATAAAAAT CACCATCCCC AGATACATAG 4080

TCCGTCCGGA GATGGTGATG GTTTATTCTT CTGTTATATC AATCACAATC TCTTCTGAGT 4140

CATCAAGAGC TTCGGCTTTT TCTTGCCATT GCTCCTTGAG ATTATTTAAT TGATTTTTTG 4200

ATGCTTCTGT CGCTTGAAAA GCATAGGATT TAGTTTGAGC AAGTATACTG TCCACAGTGA 4260

TTTCACCTGA CTCAACCTGT TCTTTTGTTT TCAGAACAAA ATCTGTAGCC TGCTCCTTAA 4320

CTTCTGTCAG TTTTTCACAG ACTTGCTCCT TGGCATACTC CGGATCTTCT CTCAAATCAT 4380

CTAGAAAATC TTGAGCCTGA CTGCAAACTT GTTTGCCCTT ATCACTTGTT AAAAACAAGG 4440

CAAGAGCTGC ACCTGAAACG GTTCCTAAAA GGATTGAGGA TAATTTACCC ATAAGGATTC 4500

TCCTTTTTTA TTTTTTGAAA AATTTACTTG CAAGACGAAG AGCTGACAGA CTTGCACCAG 4560

TCTTGAGTGT TTTTGAACCA GCTGATGAAG CTTTCTTGCT CAAGACACGC GCATGGTCAT 4620

TGAGGTCTGA AACAGATAGA GATAAATCTG CAACAGCACT GAAGAGTGGA TCAATCGTAG 4680

CCACCTTGAC ATTGATATCA TCTGCCAAGA CATTGACCTT AGCCAACAAC TCATTGGTGT 4740

GATGCAAGGT CACATCCACA TCTGAAGTCA AGGTTTTAAT CGTCTTTTCT GTTTCATCGA 4800

TGACACGACC AAGCTTTTGT ACAGTAATGA TCAGATAGAC CAAAAAGACA ATCAAAGCTA 4860

GGGCAACAAG AATATATGCA ACTTCTAACA TTTAGTTTTC CTCCTCTGTA ATATAGTAAG 4920

GGGCCTTCTT TCGATTTTGA TAAATAACGA TCATTATACC GAGACCGATA AGGACAACTG 4980

ACAGCCATTG GGACACTCGA AAGCCGAAGA ACATGAGACT ATCTGTTCGC ATACCTTCGA 5040

TAACCATACG ACCGAAACCA TACCAAATCA AGTAAAAGGC CGTGATATGA CCTCGTCTGA 5100

GACTCTTCCA TTTCCGTCTA AAAATCAGAA TCAAGGCAAA GCCAAGCAGA TTCCATAGAG 5160

ACTCATAAAG GAAAGTCGGT TGACGGTAGC TCCCCTCAAT ATACATCTGG TCACGGATAA 5220

AGCCAGGTAG ATAATCCAGA TTATCCACTG TTGCACCATA AGCTTCTTGG TTAAAGAAAT 5280

900

TACCCCAACG CCCCAAACTT TGAGCAATCA TAACGCTAGG CGCCGCAATA TCTAGAAAAT 5340

CCCAAGTATT GATGAGTTTA CGGTCAGCAA AGATATAGAG CACAAGAGCC CCAGTTATCA 5400

AACCACCGTA AATGGCCAAA CCACCATTCC AAATGGCAAA AATCTCTCCT AAATTCTGAC 5460

TATAGTAATC AAATCGGAAA ATAACATAGT AGAGACGAGC TCCTAAAATA GCCAAGGGAA 5520

AGGCTACTAA GATAAAATCT AAAATATCGT CTGGTATGAT CTTCTTTCTA GGTGCTTCTT 5580

TCATGGTCAA ATAAACCGCA AGAATCAAGC CTGTCACAAT ACATAAGGCA TACCAACGAA 5640

TGGCTAGGGG TCCTAGTTGA ATAGCAATTG GATCAAGCAT TTTGCACCTC ATTTCGAGCG 5700

ATTAGACTTG TCAGTCGTTC GTCGAACAAA CGGGTCGCAT CAAAGCCCAT TTCCTTGGCA 5760

CGATAATTCA TGGCAGCTGC CTCAATCACA ACAGAGATAT TACGACCTGT TTTAACTGGA 5820

ATACGAATAC GAGGAATGtA CGCCAGAAAC TTCAAGTTCC TCTGCATTAT TTCCAAGACG 5880

ATCAAAGGTC TTATGCGTAT CGTAATTTTC CAAATAGACA GCAAGCTGAA CCTGTGAAGA 5940

ATCCTTGACA GCACTCGCAC CGTAGAGACT CATAACATCG ATAATACCAA CCCCACGAAT 6000

TTCAATCAAG TGTTTCAAAA TTTCAGCTGG TTCACCCCAG AGAGTAATCT CATCCTTGGC 6060

AAAGATATCG ACACGGTCAT CGGCTACCAA ACGGTGACCA CGTTTGACAA GCTCAAGACC 6120

TGTCTCGCTC TTACCAATTC CACTATCTCC CTGAATCAAG ACGCCCATCC CATAAATATC 6180

CATCAA 6186

(2) INFORMATION FOR SEQ ID NO: 132:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 9541 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 132:

GAAAATCACA ACCCTTTTTG CAAAATTTTT GAGATTATTT TCACAAACTT GATTTTTCAA 60

AGTATACTCA ATAAAAATTA AAAAAATCCA CTACGTCAAG GCGAGGCTAA TGTGGTTTGA 120

AGAAATTTTC GAAGAGCGTG AATGAGTATC ATCTATAGTA AAATAAAAAA ACTGAACAAT 180

TTGGTTGGGG ACAGCCAAAC CAATTTCTCA CAATGTTTCA GAAACAAGGG TGTGCTATTC 240

CAATTTCAGC CTACTATAAC TGTCATAGAT TGCTGAAACA AAGTCTAGGT AAAAGTCTTC 300

ATAATAAAAA GACCTCCTAT CAAGTGTTCA AAAACTTTGA TAGGAGGTCT TGTTTTGTGA 360

AAATATTTAT CAAATTTTCT ATACAAGTGA GCTGTTAGCC AGGTTCTTTC TATTCTTTCA 420

ATTTCAATGA ATGGATTTTT TACTAATACT CATAACTGGG AATTTGTCTG TGTAAAAATA 480

GCGAGATAGA TGGTATTTAT AAAACACTCA AGACAGCTAG ACTAATATCA TTTAAAACAT 540

TATCTTCTTT TGAGCGACTG TTGGTTACCA ACATAGCTAA ATTTCCTGCA TTTTCAAATT 600

GATAGGGTTC TGATTTAGCA TTCACAACCA CCAAGAGGTG TTCTTTGCCG TGAACTTCAT 660

AGATAAGGTA GCCGCTATGT TCAATCGCAG AATGCACAAA GACATGATGG TAAATTTCAT 720

CATAGCTAGA GTAAGAAAAG GCACCAGTTT TTGTCTTCAA TCGGATGACT TGACGGATAA 780

ACTCAATACT GTCTTGACGC TCATTAATCA AGTTCCAGTT CACTTGGTTC ACACTGTCAG 840

GAGCATTATA GCTATTCATC GCACGCTCTC TATCATCATG GGTCAACTCA CCATTTTCAC 900

CAGTCGCAAC CAGTTTGGTA CGACCAAATT CTTGACCGAT TTCCATAAAG GCCATCCCCT 960

GCATGAGCAG ATTCATGGCT GTGGCAGTTT CGACCTTGCG CATGATTTGC TCTGAACTTT 1020

GGTCTGGATG AAGGGTTGCC AATAAATCGT GAAGATTGTA ATTGTCATGG GCTTCTACAT 1080

AGTTAAGCAC CTGATTTGGA TGTGTATAGC TTCCTAATTC ACGACTTCCT AGGATTGCTT 1140

TAGCTAGAAT TGGCTCTGTC GCAGCACCAC TGACAAAACC TGACTTGATA GCACCATAAA 1200

CTTCTCCCCC TTTGACAGCA TCGCGCTGAT TGTCATTAAA GAAACCAATA TTTGGCATCT 1260

GGTAGGCATT GTCCTTCTTG GCCTTATCAT AAGGGGCAAG ACCTGTTCCC ATATCCCATC 1320

CTTCTCCATA GAGGATAATG TTGGAGTCGA TTTCATCCAA GCTTTGACGA ATCATCTGCA 1380

TGGTCTTGAC ATCATGAATC CCCATCAAGT CAAAACGGAA GCCGTCAATA TTATATTCCT 1440

GCACCCAGTA TAGAAGAGAA TCAATCATAT ACTTGCGAAA CATTTCGTGT TCACTGGCTG 1500

TTTCATTTCC AACACCCGTT CCATTCTGGA AGGTACCATC TGGATTCATA CGATAATAGT 1560

AATCAGGGAC TGTTGTTTGG AATGGTGCAT CAACAACTGA GAAGGTATGG TTATAGACTA 1620

CATCCATAAT GACTCCAATA CCCGCATCGT GATAAGCTTG AACCATCACC TTCAAATCAC 1680

GAATGACCTG AGCTGGATCA TCTGGATTAG TTGAAAAACT AGTTTCTGGC GCGTTATAGT 1740

TTTGTGGATC ATAACCCCAG TTGTAGGTTA CATTTCCATC CTCATCGTAT TCTTTATCAC 1800

GGTCTGCAAT TGGTTGCAAT TGAACATAAT TGTAGCCCAG CTTCTTGATG TAATCAAAAG 1860

CAGTTGACTG GCCGTATTGG TTAACTGTTC CAGCCTGAGC AGCACCCAAG AAAGTTCCTC 1920

GAAGATGTTC ATCTACACCC GATGTAGGTG ATTTAGTCAA ATCACGAATG TGCATTTCAC 1980

AGATAACTGC CTTACATGGA TTTTCCAAGC GCCAAGTAGC CTCCGAACCG TGCTTAACCT 2040

CGAAGTTTTC AACTTGCTTT TCTACATGGC TCAGAATAGC TGAACGTTTG CCATCAGGGC 2100

TGGTCGCGAT TGTATAAGGA TCACGTGTCA GTGTTTGGTG ATGAGGGAAT TGGACTTGAT 2160

ACTGATAAGT CTTACCTACC AAATCTTCTT CAACATCCAA ACTCCAGACA CCGATTGTAT 2220

TGTCCTTATG ATTATAAGAG TAGCTATTGC CTCTTTTCAT CTCAAAAGTC TTCCAAACGG 2280

GTGCATCATT AGCAGCTGAT TCATAAACGA CAACTTGCAC TTCTGTCGCT GTAGGTGACC 2340

AGAGAGAAAA ATGAGCCTGA TTGTCCTCTA CACGGCAACC CAATTCTCCT TGGTAACCCC 2400

AATGATGATC AAAACTAGCA CTGTTAATGG CCTTATCAAA GGCAAAAGGA TTTTGATTTT 2460

TATAGAAAGG ACTGGCAATA GCAGGATTTT CAGAGTAATA AATCCTATCA TCGCCTTCCA 2520

AAATCCAGAC CTCTGTTAAT AGGGGATAGT GATTAAAACG GATAGAATAT TCTTTACTAG 2580

TTTGACCTGT ATGAACCACA AAATTCAAGC TTTCTATAAC ATGTGAACTT GGGTGTTCAA 2640

AGCTAAATAA AGCTCCAAAA TAATCTTCTT TGTAGGTTAG CAAATCAATT CGTTGATCCT 2700

GACTTTTTAC AAAGGAGCAA GTGTCATATT CTCCATTCTT ACGATGGTAA TGAATGCGCA 2760

TAGGGTAGTT ATACATTTTT TATTTTTCCT TTTTACTTTG TTTCTATTTC ACTAATAAAT 2820

TTTTGTCAAT CTCGTCTCAA TTAACAGACA TAGTCATATT CTCTAAACTC TGTTTTTAAA 2880

CGATCCATTA CAAACTTTCT AGCCATGCCT CATCTCTGAC CTGGATACCA AGTTCTTGTG 2940

CTTTTTGCAG TTTACTTCCA GCGTCTGCAC CTACCACGAC GAGGTCGGTC TTTTTAGAAA 3000

TACTACCTGT CACTTTGGCA CCCAGACTTT CGAGTTTACT TTTAGCTTCT GAGCGCTTGA 3060

GTCGTTCCAA TTTTCCTGTC AATACCACGG TCAAACCTGA CAAGGCCGCA TCCGCTACTA 3120

CCGTCTGTCC TTTATAGTCC AGATTGACCC CAGTTTCTTT CAATTCTCTG AGCAGAATTT 3180

CAGAGCCTTC TGTCGCAAAA TAAGTCTGAA GACTTTTGGC AATCACGCCA CCTAGACTTT 3240

CAATACTAGC CACTTCCTCT GAATCTGCCT GAGACAGATT TTCAATTGAA TGGAAATATT 3300

GAAGTAAAAG CTGACTAACC TTGCTTCCGA CATGACGAAT TCCCAAACCA AATAAGAGCT 3360

TCTCGGCAGA ATTTTCCTTT GATGCTTGGA TAGCCTGATA CAGTTTAGCA GCGGACTTTT 3420

CCTTAACTCC CTCTAAAAGG AGGAAATCCT CTTCTTGCAA ACGATAAATA TCCGCCACAT 3480

CCTTGACTAA ATTAGCAGCA AAAAGCTTCT CAACAATAGA TGGACCAAGG CCTGTAATAT 3540

TCATAGCATC ACGAGAAGCA AAGTGAATCA AGCCTTCCAT GATTTGAGCA GGGCAACGCG 3600

GATTGATACA ACGTAGGGCC ACTTCATCTT CAAAGTGCAA CAAGTCAGAG TTACAACTTG 3660

GACAGTTTGT AGGGATATCT AGTTTTTCTT CAGAAACCCG TTTGGACTCT ACCACACGTA 3720

AAACGGCAGG GATGATGTCA CCAGCCTTAT ATACAATGAC CGTATCGTCT TTTCGGATAT 3780

CTTTTTCAGC AATATAATCT ACATTGTGCA GGGTCGCACG GCTAACAGTC GTACCGGCAA 3840

GTTGTACTGG TGTTAGATTA GCAGTTGGAG TTACAACACC GGTACGGCCA ACTGTCCAGT 3900

CAACTGATAA GAGTTGAGCT TCTTTTTCTT CGGCAGGGAA CTTGTAGGCT ACTGCCCACT 3960

TTGGAGCCTT AACTGTAAAA CCAAGTTCTT CTTGACTTGC TAGGTCGTTG ACCTTGATTA 4020

CCACTCCATC AATATCGTAA GGCAGATTTT CCCGTTCCTG TCCTACTTCT TGGATAAAAT 4080

TCCAGATTTC ATCTATGTTT TCAGCCAAGA TTCGCTTAGG ATTGACCACA AAACCTAGTT 4140

GTTCTAGGTA CTTCAAACCC TTTTCTTGGC TATCACGAGT TGAAGGGCTG GCTTCTTGAT 4200

AGAGAAACGT TGCAAGATTA CGCTTGGCAA CTACTGCTGT ATCCAACTGA CGCAGAGTTC 4260

CTGCTGCCGC ATTACGAGGA TTAGCAAATT CAGGCTCTCC ATTTTCTTGG CGCGCTTGGT 4320

TAACTTGGTC AAAGGAAGCG CGTGGCATGT AACATTCCCC ACGAACTGTG ATATCTAGTT 4380

CTTCTGGCAA AGTCAAAGGG ATGTCCTTAA CACGCTTGAG GTTTTCTGTG ATATTTTCAC 4440

CAATTGAACC ATCTCCACGT GTTACCCCAG CAACCAAAAT CCCCTTTTCA TAAGTCAGCG 4500

AGATAGATAA GCCATCGATT TTCAGCTCAC AAATATAGGT CGGATGAGCC ACTTCCTTAC 4560

GAACACGCGC ATCAAAAGCA TCTAGCTCCT CACATGAAAA AGCATCCTGC AAACTATAAA 4620

GAGGATACTG ATGACTGTAT TTTTCAAAAC CATCTAAAAC CTTGCCACCA ACACGATGAG 4680

TCGGACTGTC TGCTAGCACT TGCTCTGGAT AAGCAGTTTC TAACTCGACC AACTCACGGT 4740

AAAGGCGGTC ATACTCACTG TCTGAAACCG AGGGATTATC GCTGGTATAG TACTCAGTCG 4800

CATAGCGATT GAGCAAAGCG ACTAACTCAT TCATTCTTTT ATTCATAAGA CCATTTTACC 4860

ATAAAACAAG CCCTCCTCAC AAACGAGAAG GGCGGAAAAA ACACTTAGTT TGAAATTATT 4920

TTTGAAACTC AAGCAACCTT ATATCAATTT TTCAAAATGA GTTCGAACAT ATCCGAGAGC 4980

TAAGAAATAT AAGGCTACAA CTCCAAGTCC AATAATCAAG AAAGAATAAA GATGGACACT 5040

TGGCAAGACT GTCATAAATC CTTTTGCAAT AGGCATAAAT AGAATAGCTA AGGTAAAAAT 5100

TGTACTCAGT ACTCTTCCAA GAAATTCGCT CTCAACCTTG GTTTGTACTT GAGTAAAAAA 5160

GTGAATATTA AAAATCGTCA TAAACAATTC ACAAACTAAA TTTCCAGAAA AGGAAAGAAA 5220

AGTTGGAAGT GGTAATCCCA TCATAAAAAC TCCGACACCT GTCAAAGCCA GTAAAATCAA 5280

AAGATTATAA ATATTAGCTT TAATTTTACT AGCTAGAAGA GCCCCAATGA TGGAACCAAT 5340

AGCCCCCATA GTTAAAATAC TTGCATAGGC TCCTTCTGAC CCGTAAAGCT GATTCGAAAA 5400

GGGAAGTAGA AATTCAAAAG CTGCAAAAAA GAAATTAACG CTGGAAGCTA CCAGCAAAAG 5460

GAAGAAAATT TCTTGCTGAT GCCAGATATA GTGTAACCCA TCCTTGATAT CTACAAAAAT 5520

ATCTCTCCCA GTAAAAGCCT TTTTCTCTTG AACTTTTGCT TCCTCTTTTG GAAGGAAAGC 5580

CACTAGAACA AAAGCAATGA AAAAAGTCAG CGAGTCTAGC AGTAGCGTCA TATGGAGACT 5640

TGCAAACTGT AAAACAAGGA AGGAAAGAAC AGGAGAGCTA ACACCTACAA CCTGCAAAAC 5700

CAGCTCTAAG CGAGAATTAT AGATCACAAT CTCATCTTTC TCCACCACTT CAGTTATGAT 5760

AGCTTTATTG GCTGTGCGAG AAAAGGCAAA AGCAATAGCC TGCACAATGT TAGCAACAAT 5820

CAAAGCGCCA ATCATCCAGC TATCATTCCT TATGAAAGAA ATAGCCAGAC AAAGAATCCC 5880

ACAAACAAGA TCTGCCGTCA TTAAAATCTT ACGACGAGAA AAACGGTCTG AAATAACTCC 5940

GCCAAAGGGA TTGACGAGAA TAGATGTGAC GAGCTCAGAA ATCTGATACA TTCCTAAAAC 6000

TGTCTGTCCT ATAGTCCCCA TAGAAGCCAA CCAGACACTA TTTCCATAAT CATAGAGCAT 6060

ATTTCCCATT TTATTGATAG CCCCACGGCT AATCAACTGC ACTGCATAGC GATTCATATT 6120

AAAGCTCCTC TCAAATTTTG AAACTATTGT ATCAAAACCG AAAGGAGCTT TTTATTTTTT 6180

CCCTTATTTG GGAAAATTAA CTTTTGACAA ATTTTTCGTA GTGTTCCTGA TAATAGGCTA 6240

CTTGCTCTGG AAGACCTAAC ACATCAAAAA TATGCATGGC CTCTTGCATC TGCTTACAGC 6300

CTTCTTTACA CTGTCCTTTT TGATATAAGG CAAAACCTTT TAAATAATGG AAAACATTAC 6360

GCTCATAAAG CTTAATACCT TTGTCAATAA TCTTCTCTGT ATAAGCCTCA AAATAGTTGG 6420

CATTATAAAA AGAAGAATGC TCTAAACAAT GCTGGTAACA ATTGAGGGCC AAAATCAACA 6480

CTAATCTCTT ATGGCGACTA ATCTCTTGGT AAAATTCCTC CCTCTCCATA ACTTCTCTAC 6540

CAATCCGAGT GACATAGTCT ACATCGTAGA AACTATAGAG GTTACCGAAA AGAATCAACT 6600

CATACATGGT CCATTCTTCT GTTTTGAAGA GATAATCTGC TACCTTACCC AAATCATCCT 6660

GCTTCATATC ATAACTCGCA TCTCTTTGAC AAATCAGACC TTGTAGCAAA ATCCAGTTCA 6720

GCTCAAAATA AAGGGGAGTC GTCGAACTCT TAGACTTTTC AAGTTGTTCT CTTTGAAGCT 6780

TTTGAAAACC TGCAATATCG TTTGAATAGT AAAGTGGGAT AATCTGTGCC ATCATAGACA 6840

CATGTTCATG ATTATGAAAA TTCCTTGCCT TATCCATGAA ATTTTCGATT GTTACATGAA 6900

TGTTATCCAA AATCTCAAAG AAACGGGAGA CTGCCAGGTC AGACTCCCCA AGCTCAAAGC 6960

GAGATAACTG AGAGGTAGAG CAGGATTCGC CTGCTGCTTC CTTTAAAGAA TAATTTCCAC 7020

TTGTTCGAAA TTCACGAAAT ACTTTTCCAA GATGTTCCAT CTTTACACCT GCTCTGATAA 7080

TTCTTCCCAC TCAAGCATAG CTTCTTCCTG ACGATGGCTG ATTTTGTCCA GCTCAGCCTG 7140

TAATTCCATG AGTTTGTCGG CATCGTTTGT TTCCAACATT TGTTCAGAAA TGGCTTGGCT 7200

TTGACTTTCT AGCTCTTCAA TTTCAGCTTC TAGACTTTCG ATTTGTCGCA TGAGTTTGCG 7260

AACTTCTTTT TGACTTTCTT TCTGGGCCTG ATAGTCATTG ACTGGACTTG CTTCCTTTGC 7320

TTGATTGCTA GTTGAAGCTT CCTCAGTCTG ACTCATTTCT GCTGTTGCTT TCTTCTCAAC 7380

ATAGTAGTCG TAATCTCCAA GGTAGAGAGT TGAACCATTC TCAGACAATT CCAAAACATG 7440

AGTTGCCACA CGATTGATAA AGTAACGATC ATGACTGACA AACAGCAAGG TTCCATCAAA 7500

GTCAATCAAG GCATTTTCTA GCACTTCCTT ACTATCAATA TCCAAGTGGT TGGTCGGCTC 7560

ATCCAGAATC AAAAAGTTAT TGTTTTCCAT AGACAATTTA GCTAAAAGCA AACGAGCTTT 7620

TTCGCCACCA GATAGCATGC CGACTGATTT TTTAACATCA TCTCCTGAGA AAAGGAAGGC 7680

TCCAAGACGG TTGCGGATTT CAACTTCTGG TGTCAGTTTG AAATCATTCC AGAGTTCATC 7740

CAGCACCGTA TTACTTGGTG TCAGCTTGCT TTGGGTTTGG TCATAGTAAC CAACCTCAAC 7800

ATTAGCGCCA AAGCGCTTTT CTCCCTTGAT AAAAGGAATC TGGTCCACAA TAGACTTGAT 7860

AAAGGTTGAC TTGCCGATAC CATTTGGACC AACGATAGCG ACAGCATTCA TCTTACGAAG 7920

ATCTAGGTTA ATCGGTTGTG ACAAGACTTC CCCGTCATAG CCAACAGCTG CATTTTCAAC 7980

AGTCAAAACA ACATTGCCCG ACGTTTTTTC AGACTGGAAG GTCATGTTGG CTGATTTCTT 8040

GCCAGCTTCA GGCTTGTCCA AACGTTCCAT TTTTTCCAGT TGTTTACGGC GAGATTGAGC 8100

ACGTTTAGTC GTTGAAGCAC GAACTAGATT GCGATTGACA AAGTCTTCCA GAGCAGCGAT 8160

TTCCTTCTGT TGCTTTTCAT AGTTTTTTGC CTCAGTAACT AGCTTTTGCT CCTTCAATTC 8220

GACAAAACGA GAGTAATTCC CCACATAGCG ATCCAAGGAA TGCTTGGTCA AATCTAGCGT 8280

AATTGTCGCA ACCTTGTCCA AGAAATAACG GTCGTGGCTG ACGATAATGA GGGCACCGCT 8340

ATAGTTTACC AAGTAATTCT CTAGCCAGGC GATGGTTTCA ATATCCAAGT GGTTAGTTGG 8400

CTCGTCCAAG ACCAAGAGAT TGGGCTTTTC AAGGAGCATT TTGGCAAGTG CCAAACGAGT 8460

ATTTTGACCA CCAGAAAGCT CAGCAATTTT CATCTGCCAC ATAGACTCGT CAAACTTGAA 8520

TCCATTCAAA ATCGCTCGAA TATCAGCTTC ATAGGTAAAG CCACCTGCTT GGCGAAAATT 8580

CTCAGATAAG CGGTCATAAT CTGACATCAG TTTATCCAAA TCCTCACCAG ACTTTTCACC 8640

CATCTCCAGC TCCATCTGAC GCAGTTGTCT CTCCGTCCGA CGCAAATCAT TAAAGACATG 8700

AAGCATTTCA TCGTAGATGG TATTTTCAGA CTCAAAACGG CTATCTTGGG CTAGGTAAGA 8760

CAGAGAAATA TCTTTTTTCT TATTGATTTC TCCGCTAGTT GGCTCCTCTT CTCCAACTAA 8820

AATCTTCAAA AGAGTAGACT TACCTGCACC ATTTTTCCCA ACAAGAGCAA TCCGATCTCG 8880

TTCATCAACC TGCAGGTTGA TATTATCGAA AAGAACCTCT CCTGCAAAAG AACGTTCAAT 8940

TTTATTAGCT TGTAAAATAA TCATACAAGT AGTATAGCAT GTTTCCCTAA GGCATTCAAG 9000

ATAATCGTAA GTCTTTTAGT ACAACTTTTA TAACATAAAA TAAACTAAAT TATGTATATT 9060

TTATATTAGA TTACTTCACT ATCTTGTTGG ATTTTCTAAC CAGCTAATCT TGTTTCAAAT 9120

AGTTATCGCA CAAGTCTATT ATTTAATTCT TTTCATCATT TACGTACGTA TAGCAGATTG 9180

AAATAAGATG AGAACAAATC GATTGGGAAA GTAAAATTAA TTTCTATAAA TGTTTTAGCA 9240

ATTGTTTCGT ACTATTTTAG ATTCAGTCTA CTATATACAA TATTTTCGGA ACATTCAACT 9300

TTTTAACTCT ATTTATTACT AGATTTCATA ATTAAAAAAC CTACTGACCA AGCTAGAAAG 9360

CTTGATACAA TAGGCTTTTT AAAGACTGAT TATTTAACAG CGTCTTTAAG AGCTTTACCA 9420

GCTTTGAATG CTGGTACTTT AGAAGCTGCA ATTGTCATTT CTTTACCAGT TTGTGGGTTG 9480

CGACCTTTAC GTTCTGCGCG CTCACGAACT TCAAAGTTAC CAAAACCGAT CAATTGAACT 9540

T 9541

(2) INFORMATION FOR SEQ ID NO: 133:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 3502 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 133:

TTGACTATCC TATCATGCTT TCTAAGGTCT ACTCAAGAAA ATCATTTTCA AGTTTTCACA 60

CCTTTCTCAA AAAAGTTAAA AAATTTTCTC AAAAACGCTT GACTCTGACC TAAGGCGAAG 120

GGTTATACTA TCATTGTAAG GAGGAAATCA TGTACCATAT AAAAGAAGCT GCGCAGCTTT 180

CAGGTGTCTC TGTCAAGACC CTGCATCACT ATGACAAGAT AGGACTCTTG GTCCCCTTAA 240

AGTCGGAAAA CGGCTATCGA ACCTACAGTC AAGAGGATTT GGAACGCCTT CAGGTCATTC 300

TTTACTACAA ATATCTAGGC TTTTCTTTAG AGAAAATAGC AGAGCTGTTA AAGGAAGAAA 360

GGACAGATTT ATTGCCCCAT TTGACTAGGC AGTTGGACTA TCTAACTCGC GAAAGGCAAC 420

ATCTGGATAC CTTGATTTCC ACCTTGCAAA AAACTATTCA AGAACAAAAA GGAGAAAGAA 480

AAATGACCAT TGAGGAAAAA TTCACGGGAT TTAGCTATCA AGACAATCAA AAATACCACC 540

AAGAAGCGGT AGAGAAATAT GGTCAAGAAG TCATGGGACA AGCGCTCGAA CGCCAAAAAG 600

GTCACGAAGA CGAGGCTACG GCCGCCTTTA ACCAAGTCTT TCAAACTTTG GCACAAAATC 660

TTCAAGTTGG TTTACCTGCA ACAGCAACCG AAAACCAGGA GCAAGCAGCC AAGCTCTTGC 720

AAGCCATTCG CACTTATGGA TTTGACTGCT CTATTGAGGT ATTCGGTCAT ATCGGTAAAG 780

GTTACGTCTA CAACCCAGAG TTTAAGGAAA ACATTGACAA GTTTGGTTCT GAAACAGCCC 840

AGTACACGTC AGATGCCATT GCGGTTTACG TTCAGACAAA TGCAGAATAA ATAGGCTAGG 900

AATTTCCTAG CCTATTTTTT ACTTCAAATC ATAAAGCCAG TCGTCACCGT TTTTGTAGTA 960

AAAGAATTCA CTGAGATCTT CTTCTAGAAA CACACGAAGC ATATCAGACA TATCATCGGT 1020

TGCAAGTTTT AGATGAGAAA GATTTTCAAA GTCCTCCCAC CAAACTTTCC CTTCGTCTGA 1080

AGACTGGAGT TCACCAGTAA AGTGTTCTGT CTTGTAAAAA AGGACGACAT AACGATAATC 1140

CTTGTCGTCA TACCAGTTTT TGATACCACA GAGTTGGGGT TTGGAAATGA TCAGACCAGT 1200

TTCTTCTTTC ACTTCACGAA TGACAGCATC GACAAAGGAT TCGCCACGTT CAACATGACC 1260

ACCAGGAAAA GTAATGCCAG ACCAGTCGGG ATTAACTCGG TCTTGGACCA GGACCTTATC 1320

TCCGTTTTTA ATCATACACA TGTTAACAAA TTCGACTGCC TCTCTTCTGT TCATTCTTCA 1380

CAACCTTTAA TCTTTAATCA TAATGCAGAC TTCCCGCCAC CCAGCCGGTA CAGAGGGCAG 1440

AAGTGATGTT AAAGCCACCC GTGTGGGCAT TGATATCCAT AACTTCGCCT GCAAAGTGGA 1500

GGCCAGGTAC CAGCTTACTT TCAAGGGTTT TAGGATTGAT TTCCTTGAGA CTGACTCCAC 1560

CCTTGGTAAC AAAGGACTTT GCAAGGGACA TTTTTCCAGT TACAGGAATT TTAAGTTCTT 1620

TAATGGACTG GACAAGTTGT TCTCGTTCCT TTTCAGTCAG TTGTTTGACT TTTTCAGGAT 1680

ATCCTTGTAC AAAAAATTCG GCCAAGCGTT CTGGTAACAA GGTTTTTAAA GCGTTTTTCA 1740

AGGATTTTTC CCGATTTTCT TCTAGAAATG TAACCAAGTC CTTCTCAGAA AGTTGAGGCA 1800

AAACATCGAG TGAGAGAACC TCCCCACCTT TGACAAAGCT AGACATGCGT AGGGCAGCAG 1860

GACCTGACAA ACCAAAGTGG GTAAAGAGTA AATCATGAGT GATGACATGC TTACCATAAC 1920

TTAGGGTCAC ATCGTCCAGA GAAATACCTT GTAAGGCTTT ATGTGGAAAA TCTGTTAATA 1980

AAGGACTTTC AGCAGCCTCA AGATCGGTGA TGGTATGCTT AAAATGGCGA GCAATCTCGT 2040

GACCAAAACC AGTCGAACCA GTCGAAGGAT AAGACTTACC ACCTGTTGTG ACAATGAGTT 2100

TCTCACAAGT GAAGGTTTGA TCCGCTGACT TAAGGACAAA CTGGTCATCT ACTTTTTTAA 2160

CAGAAACGAT TTCTATTTGA GTAGCAACTT GACCACCTAG TTCGGTGATT TTCTTTTCCA 2220

AAGCTTCGAT AATAGTCCGA GACTTGTCAC TGGCTGGAAA GACGCGTCCG TGGTCTTCGA 2280

CCTTAAGTTT AACACCATTT TCTGTAAAAA AGTTGATGAT GTCATGATTA TCGAACTGGG 2340

AGAAAACACT GTAAAGAAAG CGTCCGTTTC CAGGAATTCC AGCTAGCAGG TTGTCTAAGC 2400

TACCATTGTT GGTCACATTG CAACGTCCCC CACCAGTCCC AGCTAATTTT TTTCCAAGTT 2460

TCCGATTTTT TTCGATGAGG AGGGTTTTCT GTCCATAAAA GCTACTGGAA ATCGTAGCCA 2520

TCATACCAGC AGGTCCCCCA CCGATGACAA TAGTATCAAA ATGTTTCATA GCTCTATTGT 2580

ACCACAAAAA AACAAGAGAT GATGGTCACC TCTTGTCAAG AATGCAATTA ATCAATTTCA 2640

TAGCCCATCA GCAAACCGCC CTCTTCTGCA TAGAAACTGC AGAGACCAGA GGTTGGTAGA 2700

ATTTTAATAT CCGCTTGTGG GAAGGTTTCA CGGATTCGCT CTGAGAGCTG TTGACAACAT 2760

TTTTCGTTAT TGCGTTGGGC CATGACAATA CGGCCACCAG CATATCCAGC TTTTACTAAC 2820

TCATCATAGG CAGCTTGAAC TGATTTCTTT GATCCCCTTG CTTTTTGTAG CAATTCGAGA 2880

GTCCCAGTTT CACTAGCTTT TCCGACCATA CGAATGTTGA GAAGGCCAAC GACCGTACCG 2940

ATAAGCTTGC TCAAACGGCC GTTCTTCACC AAGTTATCGA CTTTGGCTAG GACAAAGAGC 3000

AACTTAGTTT TTTCTTGATA GGCGGTGATA GCTTCAACCA CTTCTTCAAA AGACAAGCCC 3060

TGGTCAATCA AGTCATTCAA TTTTTCTACG AGTAGGTCAA CTTCACCACC AGCAGATAAA 3120

CTATCAATCA CATGAATCTT AGTGTCAGGA TGGTCTTCCA GATAAATATT CTTTGCTAGT 3180

TGAGCACTAT TGTGACTGCC AGAAAGGGTA CCTGTGATGG TTACTAGGAA AATGTTTTTG 3240

GCACCTTCAA ATGCTCGCAA ATAGTCATCT GGGCTTGGAC AAGCCGATTT TGAAGCTTCT 3300

GCAGTTGCAT ACATGGTTTC CATCATTTGG TCAATATCGA GACTGGCGTC ATCAACAAAG 3360

ACCTGATCAG CTACTTGAAT GGTTAAGGGG ACACTTACAA AGGTTGTGTT AATAGCTGGT 3420

GTTGGCAGTT GACGATAATC ACAACCAGAG TCAGCAATAA TCTTCCAAGT CATAGAAATT 3480

CTCCATCTTT GTCAGGAACG AT 3502

(2) INFORMATION FOR SEQ ID NO: 134:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 12665 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 134:

CGATTGATTT TTTTAAAGCG TTCGATAGAG AATGAGAAAC GAATCCTTAG CAATGGCGGG 60

AAAGAATTTG GAGTTGAGAA TACAAAACGA TTAACTATGG CTCATATTGT TTTTTATCTC 120

TCTTGCTTGG TTGAGGCAAT GGTGCACAAG ACAATTTTTG ATGGCATGGG CATGGTTGGT 180

TTAGTCTTGC TTATTTTTTC TATGCTGATG TTGATGTTGG TGATTCACTT GTTGGGAGAT 240

ATTTGGACAG TGAAGCTTAT GCTTGTCAAT AATCACAAAT ATGTAGATCA TATCTTGTTT 300

AGGACAGTAA AACACCCTAA TTACTTTTTA AATATTCTTC CTGAGTTGAT TGGCTTGACC 360

TTGTTGAGTC ATGCTTATGT GACTTTTGTT TTAGTTTTTC CAGTTTATGC AGTTATTTTG 420

TATCGACGAA TAGCTGAAGA GGAAAAGCTA TTACATGAAG TTATAATCCC AAATGGAAGC 480

ATAAAGAGAT AAATACAAAA TTCGATTTAT ATACAGTTCA TATTGAAGTG ATATAGTAAG 540

GTTAAAGAAA AAATATAGAA GGAAATAAAC ATGTTTGCAT CAAAAAGCGA AAGAAAAGTA 600

CATTATTCAA TTCGTAAATT TAGTGTTGGA GTAGCTAGTG TAGTTGTTGC CAGTCTTGTT 660

ATGGGAAGTG TGGTTCATGC GACAGAGAAC GAGGGAGCTA CCCAAGTACC CACTTCTTCT 720

AATAGGGCAA ATGAAAGTCA GGCAGAACAA GGAGAACAAC CTAAAAAACT CGATTCAGAA 780

CGAGATAAGG CAAGGAAAGA GGTCGAGGAA TATGTAAAAA AAATAGTGGG TGAGAGCTAT 840

GCAAAATCAA CTAAAAAGCG ACATACAATT ACTGTAGCTC TAGTTAACGA GTTGAACAAC 900

ATTAAGAACG AGTATTTGAA TAAAATAGTT GAATCAACCT CAGAAAGCCA ACTACAGATA 960

CTGATGATGG AGAGTCGATC AAAAGTAGAT GAAGCTGTGT CTAAGTTTGA AAAGGACTCA 1020

TCTTCTTCGT CAAGTTCAGA CTCTTCCACT AAACCGGAAG CTTCAGATAC AGCGAAGCCA 1080

AACAAGCCGA CAGAACCAGG AGAAAAGGTA GCAGAAGCTA AGAAGAAGGT TGAAGAAGCT 1140

GAGAAAAAAG CCAAGGATCA AAAAGAAGAA GATCGTCGTA ACTACCCAAC CATTACTTAC 1200

AAAACGCTTG AACTTGAAAT TGCTGAGTCC GATGTGGAAG TTAAAAAAGC GGAGCTTGAA 1260

CTAGTAAAAG TGAAAGCTAA CGAACCTCGA GACGAGCAAA AAATTAAGCA AGCAGAAGCG 1320

GAAGTTGAGA GTAAACAAGC TGAGGCTACA AGGTTAAAAA AAATCAAGAC AGATCGTGAA 1380

GAAGCAGAAG AAGAAGCTAA ACGAAGAGCA GATGCTAAAG AGCAAGGTAA ACCAAAGGGG 1440

CGGGCAAAAC GAGGAGTTCC TGGAGAGCTA GCAACACCTG ATAAAAAAGA AAATGATGCG 1500

AAGTCTTCAG ATTCTAGCGT AGGTGAAGAA ACTCTTCCAA GCCCATCCCT GAAACCAGAA 1560

AAAAAGGTAG CAGAAGCTGA GAAGAAGGTT GAAGAAGCTA AGAAAAAAGC CGAGGATCAA 1620

AAAGAAGAAG ATCGCCGTAA CTACCCAACC AATACTTACA AAACGCTTGA ACTTGAAATT 1680

GCTGAGTCCG ATGTGGAAGT TAAAAAAGCG GAGCTTGAAC TAGTAAAAGA GGAAGCTAAG 1740

GAACCTCGAA ACGAGGAAAA AGTTAAGCAA GCAAAAGCGG AAGTTGAGAG TAAAAAAGCT 1800

GAGGCTACAA GGTTAGAAAA AATCAAGACA GATCGTAAAA AAGCAGAAGA AGAAGCTAAA 1860

CGAAAAGCAG CAGAAGAAGA TAAAGTTAAA GAAAAACCAG CTGAACAACC ACAACCAGCG 1920

CCGGCTCCAA AAGCAGAAAA ACCAGCTCCA GCTCCAAAAC CAGAGAATCC AGCTGAACAA 1980

CCAAAAGCAG AAAAACCAGC TGATCAACAA GCTGAAGAAG ACTATGCTCG TAGATCAGAA 2040

GAAGAATATA ATCGCTTGAC TCAACAGCAA CCGCCAAAAA CTGAAAAACC AGCACAACCA 2100

TCTACTCCAA AAACAGGCTG GAAACAAGAA AACGGTATGT GGTACTTCTA CAATACTGAT 2160

GGTTCAATGG CGACAGGATG GCTCCAAAAC AATGGCTCAT GGTACTACCT CAACAGCAAT 2220

GGCGCTATGG CGACAGGATG GCTCCAAAAC AATGGTTCAT GGTACTATCT AAACGCTAAT 2280

GGTTCAATGG CAACAGGATG GCTCCAAAAC AATGGTTCAT GGTACTACCT AAACGCTAAT 2340

GGTTCAATGG CGACAGGATG GCTCCAATAC AATGGCTCAT GGTACTACCT AAACGCTAAT 2400

GGTTCAATGG CGACAGGATG GCTCCAATAC AATGGCTCAT GGTACTACCT AAACGCTAAT 2460

GGTGATATGG CGACAGGTTG GGTGAAAGAT GGAGATACCT GGTACTATCT TGAAGCATCA 2520

GGTGCTATGA AAGCAAGCCA ATGGTTCAAA GTATCAGATA AATGGTACTA TGTCAATGGC 2580

TCAGGTGCCC TTGCAGTCAA CACAACTGTA GATGGCTATG GAGTCAATGC CAATGGTGAA 2640

TGGGTAAACT AAACCTAATA TAACTAGTTA ATACTGACTT CCTGTAAGAA CTCTTTAAAG 2700

TATTCCCTAC AAATACCATA TCCTTTCAGT AGATAATATA CCCTTGTAGG AAGTTTAGAT 2760

TAAAAAATAA CTCTGTAATC TCTAGCCGGA TTTATAGCGC TAGAGACTAC GGAGTTTTTT 2820

TGATGAGGAA AGAATGGCGG CATTCAAGAG GCTCTTTAAG AGAGTTACGG GTTTTAAACT 2880

ATTAAGCCTT CTCCAATTGC AAGAGGGTTT CAATCTCTGC CAGGGTGCTG GCTTGCGAAA 2940

TGGCTCCACG GAGTTTGGCA GCGCCAGATG TTCCACGGAG ATAGTGAGGA GCGAGACCGC 3000

GGAATTCACG AACTGCGACG TTTTCTCCTT TGAGGTTAAT CAATCGTTTC AAGTGTTCGT 3060

AGGCGATCTT CATCTTGTCT TCAAAGGTCA AATCAGGTAG GATTTCTCCT GTTTCAAAGT 3120

AATGGTTGAT TTGGTTGAAG AGGTAAGGAT TTCCCATGGC AGCTCGGCCA ATCATGACTG 3180

CGTCAGCACC AACTTCTTCG ATGCGTTGCT TGGCTTCTTG GACAGTACGG ATATCACCGT 3240

TGGCGATGAA TGGAATCTTG GTTAGAGCTT GGGCAACCTT GTAAAGGGTC TCAAGGTCTG 3300

CGTGGCCAGT ATACATTTGT TCACGGGTAC GGCCATGCAT GGCGAGGGCA GAAACACCTG 3360

CAGCTTCAGC AGCGAGAGCA TTTTCTACTG CAAGAGATGG GTCCGCCCAG CCGGTACGCA 3420

TTTTGACAGT AAGTGGGATA TCAAGGACAG ACTGGACCTT GTTGATGATG GAGTAAATCT 3480

TGTCTGGATC CTTGAGCCAC ATAGCACCAG CTTCGTTCTT CACGATTTTG TTGACAGGGC 3540

AGCCCATGTT GATATCGACG ATATCGGTCT TGGTGTTTTC TTGGATGAAT TCTGCTGCGC 3600

GTGCTAGGCT GTCTTCATCG CTACCAAAAA GTTGGATAGA GACAGGGTTT TCGCCCTCAT 3660

CGATATGAAG CATGTGCAGG GTTTTTTCGT TGTTGTATTG GATTCCCTTG TCAGAGACCA 3720

TTTCCATTAC AACGAGTCCA GCTCCGAGCT CCTTTGCGAT AGTACGAAAG GCTGAGTTGG 3780

TCACGCCAGC CATAGGCGCT AAAACGGTAC GATTGGGAAT CTCAATATTG CCAATCATAA 3840

AAGGTGTATT AAGATTTGTC ACGAATGAGT TCCTCCAGGT CCTTTTCATC AAAGTTGTAA 3900

GTAGTTTGGC AGAATTGACA AGTGATTTCT GCCCCGTGGT CTTCCTCTTT CATTTCCTGT 3960

AAGTCTGAGC TTGGAAGGCT GGCAAGAGCG TTCATAAAGC GTTCATGGCT ACAGTCACAT 4020

TGGAAACGGA TTTCTTCTTC AGAAAGACGC TTGTAGGCTT CGTCCCCGTA GATAGCCTTG 4080

AGGAGGGCTT CGATATGGTC GTCGCTTTCG AGAAGAGTAG AGATAGCTGG CATTTCTTGG 4140

ATGCGTTTTT CAAAGCGAGC AATCTCTTCT TTCTTGGCTC CTGGCAAGAC TTGAACTAGG 4200

AAACCACCTG CAACCTTGAC CTTGTCTTCC TCGTCCAAAA GGACATTGAG GCCGACCGCT 4260

GAAGGCGTTT GTTGGCTTTC AGTAAGGTAA AAGGCAAGGT CTTCACCGAT TTCTCCAGAG 4320

ATGAGGGGAG TTATAGAGTT GTAAGGATTT CCAGTACCGT AGTCTGTGAT AACGAGGAAT 4380

TGACCATTTC CAACAAAAGG TCCGACTAGG ACTTCACCAG TCGCAGTCTT TTTGATGTCA 4440

ACACCAGGAT TTTGAACATA GCCTTTGACG TTCCCCTTGG TATCAGCGAC GGTGATAATA 4500

GCACCTAGAG AGCTAGATCC CAACACCTTA ACTGTAAGTT TGGTATTTCC TTTTTCATTG 4560

GCTGCGAGAA TCTGGCTAGC GATAAGAGTT CGACCAAGCG CTACAGTTGA GCTAGCTTGG 4620

GTTTGATGTT TTTCTTGAGC AGTGCGGACG GTTTCAGTGC TATCAAGGAC AAAAGCACGA 4680

AAGGcTCCGC TTTCTGATAT AGTTTTAATA ATTTTATCCA TAGCTACTAT TTTAGCATAA 4740

AAATGCCCAA AGGGGGAGCC GTGTGTTTAC TGATTTTCAG GATAATGGAC CAGGAAATCA 4800

GCATGAAAAT AAAAAGAGAA ACAGATTATT TTAGCATTTG TCAGATTTAT GCTATGCTTA 4860

AGGTAGAAAA TGAAAGGGAT AACAAATGTA TTTAGGAGAT TTGATGGAGA AAGCCGAGTG 4920

TGGTCAATTT TCAATACTTT CCTTTCTATT ACAAGAGTCT CAGACGACCG TCAAGGCTGT 4980

AATGGAAGAA ACAGGATTTT CAAAAGCAAC CCTAACCAAA TATGTCACCC TGCTCAATGA 5040

CAAGGCTTTG GATAGTGGCT TAGAGCTGGC TATTCACTCA GAAGATGAAA ATCTGCGTCT 5100

GTCTATCGGT GCAGCTACCA AGGGGAGAGA TATTCGGAGC TTGTTTTTGG AGAGTGCTGT 5160

TAAATACCAG ATTTTGGTTT ATCTTCTCTA CCACCAACAG TTTTTAGCCC ATCAGCTGGC 5220

TCAAGAATTG GTGATTAGCG AGGCTACGCT TGGTCGTCAC TTGGCTGGTT TAAATCAGAT 5280

TTTGTCAGAA TTTGATTTAT CCATCCAAAA TGGCCGTTGG CGAGGTCCAG AGCATCAGAT 5340

TCACTATTTC TATTTCTGTC TTTTCCGAAA GGTCTGGTCG AGTCAGGAAT GGGAAGGTCA 5400

CATGCAGAAA CCAGAGAGAA AACAGGAGAT TGCCAATTTA GAGGAAATCT GCGGTGCAAG 5460

TTTGTCTGCG GGGCAGAAAT TGGACTTGGT TCTCTGGGCT CACATCAGTC AACAACGTCT 5520

TCGGGTCAAT GCTTGTCAGT TTCAAGTCAT AGAAGAGAAA ATGCGAGGGT ATTTTGACAA 5580

TATCTTTTAT CTTCGTTTGC TGAGAAAGGT TCCGTCCTTT TTTGCTGGGC AACATATTCC 5640

ACTAGGAGTT GAGGATGGTG AGATGATGAT ATTCTTCTCT TTTCTCCTAT CTCATCGCAT 5700

TCTTCCTCTT CATACTATGG AGTATATTCT TGGTTTTGGA GGGCAGTTGG CAGATTTACT 5760

GACGCAATTG ATTCAAGAAA TGAAGAAGGA GGAACTATTG GGGGATTATA CAGAGGACCA 5820

TGTCACCTAT GAACTCAGTC AGCTTTGTGC TCAAGTCTAT CTCTATAAGG GCTATATTTT 5880

ACAGGATCGC TACAAGTACC AGTTAGAGAA TCGTCATCCA TATTTACTGA TGGAACATGA 5940

TTTTAAAGAG ACAGCAGAGG AGATTTTTCA TGCTCTACCT GCTTTTCAAC AGGGGACAGA 6000

TTTAGATAAG AAGATTCTCT GGGAATGGCT CCAGTTAATC GAATATATGG CTGAAAACGG 6060

TGGCCAGCAT ATGCGGATTG GTCTGGATTT GACATCTGGT TTTCTTGTCT TTTCAAGGAT 6120

GGCAGCCATT TTGAAACGGT ATTTGGAATA CAATCGTTTT ATTACCATTG AAGCTTATGA 6180

CCCTAGTCGG CATTATGATT TGCTGGTTAC CAATAACCCG ATTCATAAGA AGGAACAGAC 6240

ACCAGTCTAT TATTTAAAAA ATGACTTGGA TATGGAGGAT TTGGTAGCGA TTCGCCAGTT 6300

ATTATTCACT TAAAAGGCTT GGTTAATCCA GGTCTTTTTT GTGAAATTCA CACAATCTCC 6360

TCACATTTTT TTAAAAATTA AAAAAAGTTG ATAAACAAGA AAGCGCTTTA TTTTGTATAC 6420

TAGTAAGTGT AAAGAGGAAA CACCTCAAGA TCTTTATCAG GAGGACAGTA CATGTCACAA 6480

GAAAAATACA TCATGGCCAT TGACCAGGGA ACTACAAGTT CTCGTGCCAT CATTTTCAAC 6540

AAAAAAGGGG AAAAGGTTAG CTCGAGTCAA AAAGAGTTTA CCCAGATTTT CCCTCAGGCA 6600

GGTTGGGTTG AGCACAATGC CAATGAAATT TGGAACTCTG TTCAGTCAGT TATTGCGGGT 6660

GCTTTCATCG AAAGTGGTGT CAAGCCAAAT CAAATCGAGG CAATCGGGAT TACCAACCAA 6720

CGTGAAACAA CGGTTGTCTG GGATAAGAAA ACAGGACTTC CTATCTACAA TGCTATCGTT 6780

TGGCAGTCAC GCCAGACAGC ACCTTTGGCT GAGCAACTAA AAAGCCAAGG TTATGTGGAA 6840

AAATTCCATG AAAAGACTGG TTTGATTATT GATGCTTACT TCTCTGCTAC CAAGGTTCGT 6900

TGGATTTTGG ATCATGTAGA AGGTGCTCAA GAGCGAGCAG AAAAAGGGGA ATTGCTCTTT 6960

GGTACTATCG ATACTTGGTT GGTTTGGAAA TTGACTGACG GTGCGGCTCA CGTGACTGAC 7020

TACTCAAATG CAGCTCGTAC CATGCTTTAT AACATTAAAG AACTCAAATG GGATGATGAG 7080

ATTTTGGAAA TCCTTAACAT TCCGAAGgCT ATACTTCCAG AAGTTCGTTC TAACTCCGAA 7140

ATCTACGGCA AGACAGCTCC ATTCCATTTC TACGGTGGAG AGGTGCCAAT CTCAGGTATG 7200

GCTGGGGACC AACAAGCAGC CCTCTTTGGA CAGTTGGCTT TTGAGCCAGG TATGGTTAAG 7260

AATACTTATG GAACAGGCTC TTTCATCATC ATGAATACTG GGGAAGAGAT GCAGTTGTCT 7320

GAAAACAACC TCTTGACAAC CATTGGTTAC GGAATCAACG GTAAGGTTTA TTATGCCTTG 7380

GAAGGTTCTA TCTTCATCGC AGGAAGTGCT ATTCAGTGGC TTCGTGACGG TCTTCGCATG 7440

GTTGAAAATT CACCAGAATC TGAAAAATAC GCTCGTGATT CTCACAACAA CGATGAAGTT 7500

TATGTCGTTC CAGCCTTTAC AGGTCTAGGC GCTCCATACT GGAACCAAAA TGCTCGTGGT 7560

TCCGTCTTTG GTTTGACTCG TGGAACAAGC AAAGAAGACT TTATCAAGGC GACTTTGCAA 7620

TCTATTGCTT ATCAAGTGCG TGATATCATC GACACCATGC AAGTGGATAC TCAGACCGCC 7680

ATTCAAGTAC TGAAGGTGGA TGGTGGTGCA GCCATGAACA ACTTCCTCAT GCAGTTCCAG 7740

GCGGATATTT TAGGCATTGA CATTGCACGT GCTAAAAACC TGGAAACAAC AGCTCTAGGA 7800

GCGGCCTTCC TAGCAGGTTT GTCAGTAGGG TACTGGAAAG ACTTGGACGA GTTGAAACTC 7860

TTGAACGAGA CAGGAGAACT CTTTGAGCCA TCTATGAACG AATCTCGCAA GGAACAACTC 7920

TACAAGGGCT GGAAGAAGGC TGTGAAAGCA ACTCAAGTCT TTGCGGAAGT AGACGACTAA 7980

TACTGGCAGA ATAAAGCGAT TTATTTAGAA AGTGTGTAAA TATGGAATTT TCAAAGAAAA 8040

CACGTGAATT GTCAATTAAA AAAATGCAGG AACGTACCCT GGACCTCTTG ATTATCGGTG 8100

GAGGAATCAC AGGAGCTGGT GTAGCCTTGC AGGCGGCAGC TAGCGGTCTT GAGACTGGTT 8160

TGATTGAAAT GCAAGACTTT GCAGAAGGAA CATCTAGTCG TTCAACAAAA TTGGTTCACG 8220

GAGGACTTCG TTACCTCAAA CAATTTGACG TAGAAGTGGT CTCAGATACG GTTTCTGAAC 8280

GTGCAGTGGT TCAACAAATC GCTCCACACA TTCCAAAATC AGATCCAATG CTCTTACCAG 8340

TTTACGATGA AGATGGAGCA ACCTTTAGCC TCTTCCGTCT TAAAGTAGCC ATGGACTTGT 8400

ACGACCTCTT GGCAGGTGTT AGCAACACAC CAGCTGCGAA CAAGGTTTTG AGCAAGGATC 8460

AAGTCTTGGA ACGCCAGCCA AACTTGAAGA AGGAAGGCTT GGTAGGAGGT GGAGTGTATC 8520

TTGACTTCCG TAACAACGAT GCGCGTCTCG TGATTGAAAA CATCAAACGT GCCAACCAAG 8580

ACGGTGCCCT CATTGCCAAC CACGTGAAGG CAGAAGGCTT CCTCTTTGAC GAAAGTGGCA 8640

AGATTACAGG TGTTGTAGCT CGTGATCTCT TGACAGACCA AGTGTTTGAA ATCAAGGCCC 8700

GTCTGGTTAT TAATACAACA GGTCCTTGGA GTGATAAAGT ACGTAATTTG TCTAATAAGG 8760

GAACGCAATT CTCACAAATG CGCCCAACTA AGGGAGTTCA CTTGGTAGTA GATTCAAGCA 8820

AAATCAAGGT TTCACAGCCA GTTTACTTCG ACACAGGTTT GGGTGACGGT CGTATGGTCT 8880

TTGTTCTCCC ACGTGAAAAC AAGACTTACT TTGGTACAAC TGATACAGAC TACACAGGTG 8940

ATTTGGAGCA TCCAAAAGTA ACTCAAGAAG ATGTAGATTA TCTACTTGGC ATTGTCAACA 9000

ACCGCTTCCC AGAATCCAAC ATCACCATTG ATGATATCGA AAGCAGCTGG GCAGGTCTTC 9060

GTCCATTGAT TGCAGGGAAC AGTGCCTCTG ACTATAATGG TGGAAATAAC GGTACCATCA 9120

GTGATGAAAG CTTTGACAAC TTGATTGCGA CTGTTGAATC TTATCTCTCC AAAGAAAAAA 9180

CACGTGAAGA TGTTGAGTCT GCTGTCAGCA AGCTTGAAAG TAGCACATCT GAGAAACATT 9240

TGGATCCATC TGCAGTTTCT CGTGGGTCTA GCTTGGACCG TGATGACAAT GGTCTCTTGA 9300

CTCTTGCTGG TGGTAAAATC ACAGACTACC GTAAGATGGC TGAAGGAGCT ATGGAGCGCG 9360

TGGTTGACAT CCTCAAAGCA GAATTTGACC GTAGCTTTAA ATTGATCAAT TCTAAAACTT 9420

ACCCTGTTTC AGGTGGAGAA TTGAACCCAG CAAATGTGGA TTCAGAAATC GAAGCCTTTG 9480

CGCAACTTGG AGTATCACGT GGTTTGGATA GCAAGGAAGC TCACTATCTG GCAAATCTTT 9540

ACGGTTCAAA TGCACCGAAA GTCTTTGCAC TTGCTCACAG CTTGGAACAA GCGCCAGGAC 9600

TCAGCTTGGC AGATACTTTG TCCCTTCACT ATGCAATGCG CAATGAGTTG ACTCTTAGCC 9660

CAGTTGACTT CCTTCTTCGT CGTACCAATC ACATGCTCTT TATGCGTGAT AGCTTGGATA 9720

GTATCGTTGA GCCAATTTTG GATGAAATGG GACGATTCTA TGACTGGACA GAAGAAGAAA 9780

AAGCAACTTA CCGTGCTGAT GTCGAAGCAG CTCTCGCTAA CAACGATTTA GCAGAATTAA 9840

AAAATTAAGA AAAAATAAAA GAGGTGGAGG GCAGCATTCC TTGTCGCCCG TCCCTTCTTT 9900

TTAATGGAGA CAGAAAGATG ATGAATGAAT TATTTGGAGA ATTTCTAGGG ACTTTAATCC 9960

TGATTCTTCT AGGAAATGGT GTTGTTGCAG GTGTGGTTCT TCCTAAAACC AAGAGCAATA 10020

GCTCAGGTTG GATTGTGATT ACTATGGGTT GGGGGATTGC AGTTGCGGTT GCAGTCTTTG 10080

TATCTGGCAA GCTCAGTCCA GCTTATTTAA ACCCAGCTGT GACCATCGGT GTGGCCTTAA 10140

AAGGTGGTTT GCCTTGGGCT TCCGTTTTGC CTTATATCTT AGCCCAGTTC GCAGGGGCCA 10200

TGCTGGGTCA GATTTTGGTT TGGTTGCAAT TCAAACCTCA CTATGAGGCA GAAGAAAATG 10260

CAGGCAATAT CCTGGCAACC TTCAGTACTG GACCAGCCAT CAAGGATACT GTATCAAACT 10320

TGATTAGCGA AATCCTTGGA ACTTTTGTTT TGGTGTTGAC AATCTTTGCT TTGGGTCTTT 10380

ACGACTTTCA GGCAGGTATC GGAACCTTTG CAGTGGGAAC TTTGATTGTC GGTATCGGTC 10440

TATCACTAGG TGGGACAACA GGTTATGCCT TGAACCCAGC TCGTGACCTT GGACCTCGTA 10500

TCATGCACAG CATCTTGCCA ATTCCAAACA AGGGAGACGG AGACTGGTCT TACGCTTGGA 10560

TTCCTGTTGT AGGCCCTGTT ATCGGAGCAG CCTTGGCAGT GCTTGTATTC TCACTTTTCT 10620

AGTTTATACT CTTCGAAAAT CAAATTCAAA CCACGTCAGC GTCGCCTTAC CGTACTCAAG 10680

TACAGCTTGC GGCTAGCTTC CTAGTTTGCT CTTTGATTTT CATTGAGTAT TAGAAAACAA 10740

TTATGTTGAT AGAGCTTGGG CAAGAGCCCA ATTTCAGCAA AAAATGAAGT AAATCTTCTC 10800

ATAATAAAAC GCATCATATC AAGCACGAAA ATTCCACGAG GTCAACTACA GTCAGAAAGC 10860

TGAACAACAA GCCAAAACGC CCAAAAAAGG CGGCAAAAAG CAAGCACCTG CAAGCAACGT 10920

GCCGAAATGG TCAAATCCTG ATTATGTCAA CGAATTAGAC CCAAAAATCG TTGATATGCT 10980

AGTAGAATTT CACAAGTCAC AAGGCACTTT GGAAACTCCC GAGGCGCAAG CAGAAATCGC 11040

CCAAAAACGT GAAGAAATCG AGCAAAGGAG AGCTGAGCTT GAGGGTAAAA AACAAGAGCT 11100

TTTGAACCGC TTGAACAAAT AGAGTTTCGC AAGTATTATG CTTACAAATT ACTTGAGCAA 11160

TTAACTAAAA TATAAACCCT GCCTTTATAT CTAGGCAGGG TTTATATTTT AGAAATTCAC 11220

GTAGGTTGTT ACGGTTTTTA CATACCCAGT ATAGTTTGAG TTTCTATAGT ATTCAGTGAT 11280

AAACTTCCAT TTTCTTTGAG CAACATGGAT ATAAGTACTT GTTATGTAGT ATGGATATGG 11340

GCTTTGTGAA TCCAAGTAAG ACTGATAAGC TTGTATACCA AAATATGCTC CACCAATTAT 11400

TGCACCCCAT GGACCCCCCA ATAAAGCACC TATCCTACCA ATCATATAAC TGATTCCAGC 11460

ACCAGTCATG AAGTTAGCGA ATGTGTTAGC TTGTTTATTC CCATGTATTG TGTTGACGTA 11520

ATTCCAAACA TTAGGATCGT ATGATCTAAA AGATATATTT AGGTCGATTT CATTCTTTTG 11580

ATAAGCCATA TAAAATGCCC CATTGATATA GACGCCGTCA GCACGTCGTT CAATAGTGTC 11640

TACACTTCCA TCTGGATTGA CAACCTCAAG AACTTCATCG CTTAAAATAT TTACTTGCGT 11700

ATCTCCGAAC CGCACTGATG AGCCATTCTC AAACTGAGCC TCACCAGATA CAACTTTAGA 11760

GTTTGCCGAT AAGCTATCAT CAGCAAAAAC AAACAAGCGA CGGGGAAATG CTAGACATAC 11820

AGAAAACAGA CATAACTAGC AAACACATGC ATTTAAACAT CTTAGACATA ACGGAAACTC 11880

CTTTGTATTT TTGATTTTTT TCAACTTTTA TTATACAATA AAACCAAATA AAAAGAAAGC 11940

GGTAACAATA TGCTTAATGC GAAAATTTTT TATATATTTT TATGTTTGAT CGTTATCGAA 12000

ACTACAGGCT TGTTGTTGTT GAAAAGAGGT CTCGAAATGG GTTATTTAGA CACAGAAGCT 12060

ATTATCCTCG CAGTTTTTTC ATTTGCTTTT TACAACCTAT GTTCATTCGC TTGGGTCTGC 12120

TCTACAATAA AAAACAATAA AAAATAAATA GACGTATTTT CAAAAAAAAC maAATGCATA 12180

TTTATATTAG CAAAACGACG ATTTAAATCG TCGTTTTTTT GTAGTACGAC GGGCATGTCG 12240

TATATCTGAG GTGTAAGTCC TCAGCCTGAC TATCGTGAGG TAGCAGGGAG AGGAAGGGAT 12300

AGCGAAATCG TGGCTCTACG AACAGGAACG TGATAGTAAG GCGTATATAG CGGATAAGGA 12360

GGCTTCAAAC TCTAAAGTCC AAAAAGGTAG TCGTAACCTA TATGTGTAAA TCACGAGAGT 12420

AATTGAATTC GGACTAAGGT TTGTGTGAAA AAGATAAATC TTTCTAGAGT CTAAAGACTC 12480

TGCGTCAGAT TTCCTATTTT CACTGTAACC TTTTAACGTC CTCATATCTT GTATAAACGA 12540

GGAAAGATGT ACGACTTATC CCGTGAGGTT TCATGAGCGT GAAAGCGTAG TAACAACGAA 12600

TCATGAGAAG TCAGCCGAGC CCATAGTAGT GAGGAAACTT CCGTAATGGA AGTGGAGCGA 12660

AGGGG 12665

(2) INFORMATION FOR SEQ ID NO: 135:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 5305 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 135:

CGCTAATCAC TACAATCATT TTATTGTACT TTTTCACTCT CAAGAAAAGC AAGAAGTATT 60

CATTTTAGTT TCATTTAGTA TTATTTTGCA TACCTAAAAT ACAGTAAAAA ATCAGTCATC 120

TTGGTATGCT CCTGCTTTCA CTATTCAACA CGTTTTTGAC TTATACTAGG CTCATTTCCA 180

AAAGCATTAT ATAATAGTGA TATGAAACCA ACTAAACTAA ACAAGAAATA TAAGCAATAA 240

AAATTCGTTT AAAAGATCTT ACTAAAGCTA ATACTAAATA AAAATAAAAG AGTAAACTAG 300

GAAGTTTATT TCAAACAACC TAAAATACTG ATTTTCGGCT GAAGATAATA CTGGAGTGCA 360

AATTAATGGG GTTATAATAA ATAGCTGATA GCTTGTGTTG GTTTTGGATT TTTTAAGAGT 420

AGATGAGTAT TAAAACTATA AGGAGGACGA AGGTGGCTAA AAATTTAAAA TTAAAATTAG 480

CTCGGGTAGA GCGTGATTTA ACACAAGGTC AACTGGCAGA GGCTGTCGGG GTGACACGCC 540

AGACTATTGG TTTAATAGAG GCGGGAAAAT ACAATCCCAG TCTCTCGCTC TGCCAGTCTA 600

TTTGCAGATG TTTAGGGAAA ACCCTAGACC AACTATTTTG GGAGGAAGAA GATGAAAAAT 660

AGATTTTATT ATTCTCAATT ACTAGACGAA AGAGAAGAAC AACTGTTCAA TAAAGCGGGC 720

TCTGAAAGTT TCTATATCTG CATTGCTTTG TCGCTCCTAT CTTATATCAT TTCAGTATTA 780

GCACCAAGCC TTTTTAATTC TAATATGCTG CTAATCGTTA TCATCATAGG GACATTTTAC 840

TTTTTCAATC GTGCCCGTTA TCTGGGAGTG ACCTACTATG GTCGTTTTCA TTTTACGATT 900

TTGGGTTGTT TTTTCCTAAC CTTGGCTATT ACGGCTCTTT TGATGTTGCA GAATTATCAA 960

TTCAACATAG AAATTTATCA GCACAATCCT TTGAATTTTA AATACCTGTC TGCTTGGGTC 1020

ATTACTTATA TCATTTACCT TCCGTGGATC TTTATTGGCA ATCTTGGTCT TAAGAGCTAT 1080

GGCGAATGGG CTCAGAAAAA ATTTGAACAA GATATGGATG AATTGGAGAG TGGAGAATAG 1140

CTTGTTACTC TTTTCTCAAT CCAGCTAAAA TGTGATATAA TAGTACTAAT TTATTGGAAT 1200

ACATGAAAGT TCTTGAAAAT TTTCATGGGT TTCTAGCTAA GGAAGTAGGA AAAGTATGTA 1260

TCCAGATGAT AGTTTGACAT TGCACACGGA CTTGTACCAG ATCAACATGA TGCAGGTTTA 1320

CTTTGACCAA GGGATTCACA ATAAGAAGGC GGTCTTTGAG GTGTATTTCC GCCAACAGCC 1380

TTTTAAGAAC GGCTATGCGG TTTTTGCAGG TTTAGAAAGA ATTGTGAACT ATCTTGAAGA 1440

CTTGCGTTTT TCAGATAGTG ATATAGCCTA TTTGGAGTCG CTTGGTTATC ATGGGGCGTT 1500

CTTGGATTAC CTTCGCAATT TCAAGTTGGA GTTGACCGTT CGTTCTGCCC AAGAAGGGGA 1560

TTTGGTTTTT GCTAATGAAC CGATTGTGCA GGTGGAAGGA CCTCTAGCCC AATGTCAGTT 1620

GGTCGAAACG GCTCTTTTGA ACATCGTCAA CTACCAGACT TTGGTGGCGA CGAAGGCAGC 1680

TCGTATTCGT TCGGTTATCG AAGATGAACC CTTGATGGAG TTTGGGACAC GTCGGGCTCA 1740

AGAAATGGAT GCGGCCATCT GGGGAACACG CGCAGCTGTG ATTGGTGGCG CCAATGGAAC 1800

CAGCAACGTG CGTGCGGGTA AGCTCTTTGA CATTCCTGTT TTGGGAACCC ATGCCCATGC 1860

CTTGGTACAG GTTTATGGCA ATGACTATGA AGCTTTCAAG GCTTACGCTG CGACCCACAA 1920

AAATTGTGTC TTTCTTGTGG ATACCTATGA CACCCTTCGC ATCGGTGTAC CAGCTGCCAT 1980

TCAGGTGGCG CGTGAGCTGG GTGATCAGAT TAACTTTATG GGTGTGCGGA TTGACTCTGG 2040

GGATATTGCC TACATTTCTA AGAAAGTCCG TCAGCAACTG GATGAGGCTG GATTTACAGA 2100

GGCTAAGATT TATGCTTCTA ATGATCTAGA TGAAAATACC ATCCTTAACC TCAAGATGCA 2160

AAAGGCCAAG ATTGATGTCT GGGGTGTGGG TACCAAGCTG ATTACAGCCT ATGACCAGCC 2220

GGCTCTTGGG GCGGTTTACA AGATTGTTGC AATCGAAGAT GAAACTGGTC AGATGCGCAA 2280

TACGATTAAG CTGTCTAATA ATGCTGAAAA AGTTTCTACG CCAGGTAAGA AGCAGGTGTG 2340

GCGCATTACC AGTCGTGAAA AAGGCAAGTC AGAAGGCGAC TATATCACTT ATGATGGTGT 2400

GGATATTAGC GACATGACAG AAATCAAGAT GTTCCATCCG ACCTATACAT ACATCAAGAA 2460

GACGGTTCGT AATTTTGATG CCGTTCCTCT CTTGGTGGAT ATCTTCAAAG AAGGAATATT 2520

AGTTTACAAC TTGCCTAGTT TGACTGACAT TCAGGATTAT GCCCGTAAGG AATTTGACAA 2580

GTTGTGGGAT GAGTATAAGC GTGTGCTCAA TCCGCAGCAC TATCCAGTGG ATTTGGCGCG 2640

TGATGTATGG CAAGATAAGA TGGACTTGAT TGATAAGATG CGCAAGGAAG CCCTTGGTGA 2700

AGGAGAAGAA GAATGAGTTT GCAAGAAACG ATTATCCAAG AGCTGGGTGT CAAACCAGTG 2760

ATTGATGCCC AGGAAGAAAT CCGTCGTTCT ATTGATTTCT TAAAAAGATA TCTGAAAAAA 2820

CATCCCTTCC TAAAAACCTT TGTACTAGGG ATTTCTGGGG GACAAGACTC AACCTTGGCA 2880

GGACGTTTGG CGCAATTAGC TATGGAAGAA CTGCGAGCTG AAACGGGAGA CGATAGCTAC 2940

AAATTTATCG CTGTCCGCCT GCCATACGGA GTGCAAGCTG ATGAAGCAGA TGCTCAAAAA 3000

GCCCTAGCCT TCATCCAGCC AGATGTCAGC TTGGTTGTGA ATATCAAGGA ATCAGCTGAT 3060

GCCATGACAG CTGCAGTTGA AGCGACAGGT AGTCCTGTTT CAGACTTCAA CAAGGGGAAT 3120

ATCAAGGCAC GTTGCCGTAT GATTGCTCAG TATGCCCTTG CTGGTTCCCA TAGCGGAGCG 3180

GTCATTGGAA CAGACCACGC CGCGGAAAAT ATCACAGGTT TCTTTACCAA GTTTGGTGAC 3240

GGCGGTGCGG ATATTCTCCC TCTTTACCGC CTCAATAAAC GCCAAGGAAA ACAGCTCTTG 3300

CAGAAACTTG GCGCAGAGCC AGCCCTTTAT GAAAAAATCC CAACGGCAGA CCTAGAAGAA 3360

GATAAACCAG GCCTAGCTGA CGAAGTCGCA CTTGGAGTCA CCTACGCAGA GATTGACGAC 3420

TACCTAGAAG GCAAAACAAT CAGCCCAGAA GCTCAAGCGA CCATTGAAAA CTGGTGGCAC 3480

AAAGGCCAAC ACAAACGCCA CTTACCCATC ACCGTATTTG ATGACTTTTG GGAGTAAAAA 3540

GGTCCGGGGG ACCTTTTTAG CTTCTTGCCC TGAAATTAAA AAGCAAGAAA AACCTCCACT 3600

GGAGGTTTTC AGCCTCTCAT CTTGAAATAA GAAAGTGAGA GAAGGTCTGG GGGATCTTGA 3660

ACCCCGAGTT TAGAAATAAG AAAATGAGGC AGATTCAGTA ACTCGAAGAG TTCGATTTCA 3720

TCGTCTTACC CCTGCAACGA TGACTAGGTT TGAAAAAGCT TGCTAGAGCG CATTTCAAAC 3780

CAGGCAGCAA CTGCGTCAAG AAATTAGAAG ACAAACTCGT TTTCTAGCTG TTACTGAGTT 3840

GAGCCTTTTT ACTACGAGTA TAGAAATAAG GAAGTGAGGT AGCATCATGA AATCTATCGG 3900

TACGCAAATA TTACAGACAG AACGTTTGAT TTTAAGAAGA TTTGTGGAGA GTGATGCAGA 3960

AGCCATGTTT CAAAATTGGG CTTCATCCGC TGAGAATCTG ACCTATGTTA CCTGGGATCC 4020

CCATCCTGAT GTCGAAATCA CTCGAAACTC GATTTGCAAT TGGGTTGCTT CCTATACTAA 4080

TCTCAACTAT TATAAATGGG CCATTTGTCT AAAAGAAAAC CCAGAGCAAG TAATAGGAGA 4140

TATCAGCATT GTTAAGATAG ACGAGGCTGA TTTAAGCTGT GAAATTGGCT ATGTGTTAGG 4200

CAAGGCTTAC TGGGGAAATG GTATGATGAC AGAGACTTTG AAAGCTATCT TGGACTTTTG 4260

TTTTACTCAA GCAGGTTTTC AAAAGGTCAG AGCACGTTAT GCCAGTCTCA ACCCAGCTTC 4320

AGGTCGTGTC ATGGAAAAGG CTGGAATGTC CTATCTACAA ACCATTGTTA ATGGTGTAGA 4380

GAGAAAAGGC TATCTTGCGG ATCTTATTTA TTATGGTATA AGTAGGGAAG AATGTTGAAT 4440

TCTATTTTCT GTTTCTATCG AAGTCAACTA TTTATTGTAA ATATAATAAT TAGCATTCCA 4500

AGTTTATTTG AAACTTTAAA ATAGCATATT GATTAGTACA AGACAGATGT TCTAGTTCCT 4560

TCTTTAATCT GGTTTAGTGT TAGTTAAAAA ATCGCTTTAA GCTTGTAACT AAGAGGGAGC 4620

TAATCGACTA GATTCTCCAG CCGAACAGGT GGTAATGTAC TTTTTATAGT GTAATCCTAG 4680

CTGTTGTTAA ATTTAAAATA GAATCCTCTA TCGAGTTAGG GAATTAAATT CAACCAATTT 4740

TATTCATGTT TTTTCTATCA AATTATCTAA TATTAAAATA GTCTCATTCT GATGAGAAAA 4800

CTATTCCCAA ATCATTCATA CCTCTCTCAA CTAGATGTAA CTTACAAAAC CCCTGACCTC 4860

ATGAGCCACT TTCTTCCTCC TCATGAGGTC AGTTTTACTT TCTGCTGTTC CAGTATCGTT 4920

TTTCCTCGCT AGATTTCCTC AAAAGGGCAG ACTCCTCCCT TGGTGCGTCA CACGATTTTT 4980

TCATCTCGAC TGTTCTTTAA TGCATCATTA ACGACGCTTT TCTTCTAGGT GGTTCATAAG 5040

GAACAGGAAG ATTCAGGTTG ACTTTTCTAA TCCTAGAATA AAGTGCTGAA AACAATTCGG 5100

AATAGGCATA GAGACTAGAC AATTTGAGGA GCTGCTTGCG TCCTGTTCGA ACACATTTTC 5160

CCACCACGTG AAGAAAAAGA TGGCGGAAGC GTTTGATTGT TAAAGTTTGG AAGTCACCTC 5220

CAGCTAGATG TTTGAGAAAA AGATAGAGAT TGTAGGCGAT ACAGCTCATC ATCATACGAA 5280

CTTCGTTTTT GATTAAGGTT GAACT 5305

(2) INFORMATION FOR SEQ ID NO: 136:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 3964 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 136:

TGGCAGCTCG TCGTCGTAAA GGACGCAAAG TTTTGGCTGC ATAATCCAAA CGAATTCTAT 60

CAAAAATCAG TAGGAACTCG AGTCTACTGA TTTTTATTTT TGTAAAAAAG TTCAGTAGAT 120

GCAAATGGAT TCGGAAGCGA TGTTACAGTA GATTGAAACT AGAATAGTAC ACCTCTGTTT 180

CTAAAACATT GTTAGAAATC GATTTGACTG TCCTGATCGA TTTGTCCTGT TATTATTTTA 240

TTTTACTATA AAGTTGAAGT AGGTGGAGAT GGTACAGCAA CAATCGTCTT TAAAGATGGT 300

TCAGCTATTA CAATTCCAGG AAATCAATTG GTAGCACAAG ATCCAAAAGC ACAAGATAGC 360

ACTAAACTGA CTGCTGAAAA ATCAACTGTT AAAGCACCTG CTCAAAGAGT AGATGTAAAA 420

GATATAACTC ATTTAACAGA TGAAGAAAAA GTTAAGGTTG CTATTTTACA AGCAAATGGT 480

TCAGCATTAG ACGGAGCGAC AATCAATGTA GCTGGAGATG GTACAGCAAC AATCACATTC 540

CCAGATGGTT CAGTAGTGAC GATTCTAGGA AAAGATACAG TTCAACAATC TGCGAAAGGT 600

GAATCTGTAA CTCAAGAAGC TACACCAGAG TATAAGCTAG AAAATACACC AGGTGGAGAT 660

AAGGGAGGCA ATACTGGAAG CTCAGATGCT AATGCGAATG AAGGCGGTGG TAGCCAGGCG 720

GGTGGATCAG CTCACACAGG TTCACAAAAC TCAGCTCAAT CACAAGCTTC TAAGCAATTA 780

GCTACTGAAA AAGAATCAGC TAAAAATGCC ATTGAAAAAG CAGCCAAGGA CAAGCAGGAT 840

GAAATCAAAG GCGCACCGCT TTCTGATAAA GAAAAAGCAG AACTTTTAGC AAGAGTGGAA 900

GCAGAAAAAC AAGCAGCTCT CAAAGAGATT GAAAATGCGA AAACTATGGA AGATGTGAAG 960

GAAGCAGAAA CGATTGGAGT GCAAGCCATT GCCATGGTTA CAGTTCCTAA GAGACCAGTG 1020

GCTCCTAATG CTGCTCCTAA GACAACAAGT GCACCGCAAG CAACTGCAGG AACAATGCAA 1080

GATGTTACCT ACCAGTCACC TGCTGGCAAA CAATTACCTA ACACAGGTTC AGCATCAAGT 1140

GCAGCACTTG CTAGTCTTGG TCTAGTGGTG GCAACAAGTG GTTTTGCTTT GCTAGGAAGA 1200

AAGACTAGAC GTAGAAAATA GAACAGCTAG AAAATTCTAT TCTCTACTTA AAGTTAGATT 1260

ATAAGGGGGA TTTTGAGAAG TCATCAATCC TAGTGATGGG TGAGAAAAGT GAGAACCCAA 1320

GATAATCACA TACTTTAGCT GAATAGGAAT ATTCTATCAA TGTAGCCAAT CTCTTCTGTC 1380

TCTAACTGTG GAATAGGAGA TGGGCAATAT CGGATAGAAA AGATAGCAGA ATAGCTCTCT 1440

ATTGAAGAGA GGAGGGGAAA CCGAAAAATT AGGTGCCCCT CCTCTTTTTT GGTATAATAG 1500

AAGATAGAAA ACGAGGTTAG AAGAGATGAT TTTTGATACA CATACACACT TGAATGTAGA 1560

AGAATTTGCA GGTCGTGAGG CAGAAGAAAT TGCCTTGGCT GCTGAGATGG GTGTGACACA 1620

GATGAATATT GTTGGTTTTG ATAAACCGAC GATTGAGCAT GCCTTGGAGT TGGTAGATGA 1680

GTATGAGCAG CTCTATGCGA CTATTGGTTG GCATCCTACA GAAGCTGGTA CTTATACAGA 1740

GGAAGTTGAG GCTTACTTGT TGGATAAGTT AAAACATTCC AAGGTTGTGG CTTTAGGTGA 1800

AATTGGCTTA GATTACCATT GGATGACAGC GCCCAAAGAG GTGCAGGAGC AGGTTTTTCG 1860

CCGTCAGATT CAGCTATCTA AGGACTTGGA TTTGCCTTTT GTTGTCCATA CCCGTGATGC 1920

GCTGGAAGAT ACCTATGAGA TTATCAAGAG TGAGGGCGTT GGTCCTCGTG GTGGTATCAT 1980

GCATTCATTT TCAGGGACGC TTGAGTGGGC AGAGAAGTTT GTGGATCTTG GTATGACCAT 2040

TTCCTTCTCA GGAGTGGTGA CTTTTAAGAA GGCAACTGAC CTCCAAGAAG CAGCTAAAGA 2100

GTTACCTTTG GACAAGATGT TGGTGGAAAC AGATGCGCCT TACTTAGCAC CTGTACCCAA 2160

GCGTGGTCGT GAAAATAAAA CAGCCTATAC TCGCTATGTG GTCGACTTTA TCGCTGACTT 2220

GCGTGGTATG ACGACAGAAG AGCTGGCGGT AGCAACGACT GCAAATGCAG AACGAATTTT 2280

TGGACTGGAC AGCAAGTAAT GAAAGAGAAA ATTTCTCAAG TTATCGTGGT TGAAGGGCGT 2340

GATGATACGG TCAATCTCAA ACGTTATTTC GATGTGGAGA CCTATGAGAC TCGAGGTTCT 2400

GCCATCAATG CTCAGGATAT AGAGCGGATT CAGCGCCTGC ACCAACGTCA TGGAGTCATT 2460

GTCTTTACAG ACCCAGATTT TAATGGGGAA CGGATTCGGC GCATGATCAT GATGGTCATT 2520

CCAACAGTTC AGCATGCCTT TCTCAAGCGA GATGAAGCTG TTCCCAAGTC CAAGACCAAG 2580

GGGCGTTCTC TGGGAATTGA GCATGCCAGC TATGAAGACC TGAAAACGGC TCTAGCTCAA 2640

GTGACAGAAC AATTTGAACA TGAGAGTCAG TTTGACATTA GTCGTAGCGA TTTGATTCGC 2700

CTTGGTTTTC TAGCAGGGGC AGACAGCCGT AAGCGTAGAG AATATCTCGG AGAGACTCTC 2760

CGAATCGGCT ATTCCAACGG CAAGCAACTC CTCAAACGCC TAGAGTTGTT TGGGGTTACT 2820

TTGGCAGAAG TGGAAGAAGC TATGAAATCT TATGAGTAGG AAAGATGTAG CCGTTACAAT 2880

TTTTTAAGTT TCACAGTATT TTTCGAAGCA GGTAGAAGAG GAGGCGTCTG ATGTTAATTG 2940

GTCAAAAAAT TAAAGAGATT CGGATAGAAA AAGGAATTAG TCGTCCAGAT TTTTGTGGAG 3000

ATGAGCAAGA ACTGACAGTT CGTCAACTGT CGCGAATTGA AAGTGGAGCT TCGCAACCGA 3060

GTTTGCCCAA GTTAGACTAT ATTGCTCGCC GGCTAGGAGT TCCAGTTTAT AGCCTTATGC 3120

CGGATTTTTC AGCTCTTCCT TCTGCTTATT TAGAATTGAA ATACCAGATT TTACGTGAAC 3180

CAATCTATGG TAAAGAAGAG GAGTACGATA AGAAGGAAGC GTGTTTGGAA GAGATTTATA 3240

AAACATACTT TGATAATCTT CCTAAAGAAG AACAATTAGC ATGTGAAGTA TTGCAGGCGT 3300

GTTTGGATAC TTCTAGAACT AGAAGGCCTG AATATGCAGA GTTAATACTT GAGGAACATA 3360

TGCCTCAGAT TATAGAAAAA GAAGCTTATT CAATAAATGA TATGTTGTTG ATTCGTTTGT 3420

TTTTTTATCA AATGCTCATT AGAAAAGATC TTGCCAAATT TATAAATCAA ATCGAAAAGC 3480

TAATGCTCTT TCTTTTGGAA CAGAAGAAGG TAACTCAAAT AGAGAATTAC TTTATAATTA 3540

GAGATACTCT TATTTCAGGA ATGTGTTGTC TTGAAAAGGT AGGAGTAACT GATTGTTTTA 3600

ATGATTATCT ATCGTGTTTA CAAGAAATTA TGGATAAAAC TCAAGATTAT CAAAAGAAAC 3660

CTCTTGTATT TATGTTTTTG TGGAAGCAAG CATTAAGAGA AGAAAGAGAT TTTAGTTTAG 3720

CTGAATCATT TTATCAGTCT TCTAAAACAT TTGCGCAGCT AATTGGAGAT GAATTTCTAG 3780

TAAAGAAATT GACAGAGGAA TGGCAAGAGG ATGTCAAAAA ATATTTATAA ACATAGTGAA 3840

TCAGTGACAA AGATGTCCTT GTCCTCGTAT CAAAACAGTT CTAAAGTTCG TCTTTAGGGA 3900

TGTTTTTTTA GATATAAGCT AAAAATGACA CGAAATGGTT AGATTTTAAG GACATTGATG 3960

TCCG 3964

(2) INFORMATION FOR SEQ ID NO: 137:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 12666 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 137:

TGAGACCGTT ATTTGTATTA GGGAAATGGG TATCTATTTT TAATGCTGTG GGGATTTTGA 60

TTGTTTCTAT TATTCAAACC AAAAGCTTGT CAGGTATTGG AGCAGGATTG TTTAATCTAT 120

ATAACATTTC ATCTTATATA GGTGATTTAG TTAGTTTCAC TCGATTGATG GCATTAGGAT 180

TATCTGGAGC AAGTATAGCA TCAGCTTTCA ATTTAATTGT TGGTTTGTTT CCGGGAATAT 240

TGGCTAAACT GACAATTGGA TTAGTATTAT TCATTCTTTT ACATGCGATC AATATTTTTC 300

TATCGTTACT ATCAGGATAT GTTCATGGAG CACGTCTGAT ATTTGTTGAA TTTTTTGGTA 360

AGTTTTATGA GGGTGGAGGA AAACCATTTC AACCTTTGAA GGCTTCTGAG AAATATATTA 420

AGGTTATTAC AAAGAATTAA TGGAGGATAT ATATAATGGA ACATTTAGCA ACTTATTTTT 480

CAACCTATGG AGGAGCTTTC TTCGCTGCAT TGGGAATTGT ATTGGCGGTT GGATTAAGCG 540

GTATGGGGTC TGCTTATGGA GTTGGTAAGG CTGGGCAATC TGCCGCAGCT TTACTGAAAG 600

AACAGCCTGA AAAGTTTGCC TCAGCTTTGA TATTGCAATT ATTGCCCGGA ACACAAGGAT 660

TATATGGTTT TGTTATTGGA ATTTTAATTT GGTTGCAATT AACTCCAGAA CTTCCTTTAG 720

AAAAAGGCGT TGCTTATTTC TTTGTAGCTC TTCCAATTGC TATTGTAGGA TACTTTTCAG 780

CTAAGCATCA AGGAAATGTA GCAGTAGCGG GAATGCAAAT CTTGGCTAAA AGACCAAAAG 840

AATTCATGAA GGGAGCAATT TTAGCTGCCA TGGTAGAAAC CTATGCAATT CTTGCTTTTG 900

TCGTATCATT CATTTTGACC CTTCGTGTAT AAGAAATAAA TTTGCAATTC AAAGGAGGTG 960

TCTAAATGAG CAATTTAGAA AACTTACGAG AGTCTGTTAT TGAACAAGCT CATGAAAAAG 1020

GGCGTATGAA ATTATTGGAT TCCAAAAAGA AGATTGATGA TGAATTTGAA ATGCAAAAGT 1080

CGCTCATTAT AAAGAAAAAA GAAGCTGAAC ATGAACGAAA GTTAAAAGAA TTGCAACAGA 1140

AATATCAAAT AATTTTTCAA CAATTAAAAA ATAAGGAACG CCAATCAACG TTAGTATCAA 1200

AACAGAAAAT ATTAAAAGAA CTTTTTCAAT CTGCTTTACT AGAAATGGAA TCTTGGAGTG 1260

CAGATAAAGA AATGGAGTTC ATCTATCGAA TTCTGGAACG ATATTCACAA CAAGAGGTCA 1320

TAGTAACCTT TGGGGAACGG ACTTTAGCTA AATTCAATTT GGAACAATTA GAGAAATTGA 1380

AATTCTCTTT TCCAAATTAT TTATTTAGTG AACAACCTAT CTCAAATGAA TCAGGCTTAC 1440

TTATTTCAAT AGGTAAAATT GATGATAACT ATTTGTATAA AACATTAATT GGATCGATTT 1500

CTAAGGAAGA AAGTTCAAGT ATCGCAAATC AAATTTTTAT CAATTAAGGA TGAAATTGGT 1560

TAATCCTTCT TAGAAATTTG GAGTATTCCA ATAAAATTAG AAAGGTATTT TATGGATACT 1620

AATCTTTTTT CAAAAATAAA TACGACGATT TCGGTAAAAG AAAACGATTT TATTACAGAA 1680

GAAAAATTTC AAAAAATTAT ACAATCCAAA GATACGGAGA CATTGGCATT TATCTTAGAA 1740

TCAACTCCCT ATCATTTATC GATTGACATC TTAGAAGATC CTAGTCAGAC AGAGATTTCG 1800

CTAATGACAA AATTAGTCAA TGATTATAGA TGGGCCTATG CTGAAAGTCC GTCTGATATA 1860

ATTGTGACTT TATTTGCTTT ACGATATGTT TATCATAATA TCAAAGTTTT ATTAAAATCT 1920

AAGGCGGCAA TTAAGAAAGA TTTTTCTAAA TTATTAATTC CAATAGGGAT TTTTGATATA 1980

GAAAGTTTAA AACATTTAGT TTCTTCCTTA CATTCAGATA CACTTCCTGA TTTTATGGTT 2040

CGTGAAGTAG AATCAATTTG GAATGAGTAT GAAACTTTTA ATAATATTCG TGTACTTGAT 2100

GTCGGAGCTG ATCTAGCATA TTTTAAACAT CTGAAACTTT TATCTAATGA GTTAGATGAG 2160

GTACTGTCTC AGGTTATTGT CGAAATGATT GACTTTTATA ATATTATTAC TGTAAAACGT 2220

GGTTTATCTC AAAATAAGAG TCATGGGGAT ATTTTACAAT TACTTTCAGA TGAAGGAAGT 2280

ATTTCTGCTA AAGAATTTAT ATACATTGTA GAAAATCAAG AAATATTTGT GTGGTTCAAT 2340

AAAATAAATC CAAGCTTAGA TTCAATCTTT TCAACTTATG AATTGAAGAT GCAGGACGCA 2400

ACAATTTCAT CTTCTGAGTT AGAATTTTTA TGTGATTTAC TATTGTATAA AACTTTAGAT 2460

CAAGGAAGGT ACAATGTAGA GGGGCCGTTA GTTCTTGCTA GATATTTATT GGGATGTGAG 2520

TTTGAAGTAA AGAATCTCAG AATGATCATA TCAGCTCTTC AAAATACAAT TCCCTTTGAA 2580

TCAATAAAAG AAAGGATACG CCCACATTAT GGAAGCTAAT AAGTATAAAA TTGGCATAAT 2640

TGGTAGCCGT GATATTATTT TACCATTTAG CATGATTGGG TTTGATATAT TTCCTGCCTA 2700

CCAAGAACAA GAAGCTATAA ATACACTAAG AAAATTAGCT CAATCTGATT ATGGTGTCAT 2760

TTATATCACT GAAGACATTG CTTCAATGAT ATTAGATACA ATTCGCCATT ATGATTCCCA 2820

AGTTGTGCCT GCTATTATTT TATTACCGAC TCATAAACAA GGTTTAAATT TAGGATTAAA 2880

ACGTATAGAG GATAATGTAG AGAAAGCAGT AGGACACAAT ATTTTATAAT AATGTACAAA 2940

ATTGTCTGTA ATATTATTCT ATAATTTTTG GACTTAGTAA GGAGAATAAC TTTGACTCAA 3000

GGGAAGATTA TAAAAGTATC GGGACCTCTA GTTATTGCAT CAGGTATGCA GGAGGCTAAT 3060

ATTCAAGATA TTTGCCGTGT AGGTAAGCTA GGGTTAATCG GTGAAATTAT TGAAATGAGA 3120

AGAGATCAGG CATCTATCCA AGTCTATGAA GAAACATCTG GTCTTGGTCC GGGAGAACCT 3180

GTTGTTACAA CTGGAGAACC TCTCTCGGTT GAATTAGGGC CAGGATTGAT TTCTCAAATG 3240

TTTGATGGCA TACAACGCCC ATTAGATCGA TTTAAATTGG CTACTCATAA TGATTTTCTA 3300

GTTCGTGGGG TAGAAGTTCC AAGTTTGGAT AGAGATATTA AGTGGCATTT TGATTCCACT 3360

ATAGCAATTG GTCAAAAAGT GAGTACGGGT GATATTCTTG GAACTGTCAA GGAAACCGAG 3420

GTAGTTAATC ATAAAATTAT GGTTCCTTAT GGAGTATCTG GAGAAGTCGT TTCTATTGCA 3480

TCTGGCGATT TTACAATTGA TGAAGTTGTA TATGAAATAA AAAAATTGGA CGGTAGTTTC 3540

TATAAAGGAA CGCTTATGCA AAAATGGCCT GTCCGCAAGG CGCGTCCTGT TTCTAAACGT 3600

TTAATTCCAG AAGAACCATT AATCACAGGT CAACGAGTTA TTGATGCATT CTTTCCAGTA 3660

ACCAAAGGGG GAGCTGCAGC AGTTCCTGGA CCGTTTGGAG CAGGAAAGAC AGTTGTACAA 3720

CACCAAGTAG CTAAATTTGC CAATGTTGAT ATTGTTATTT ATGTCGGTTG TGGAGAACGT 3780

GGAAATGAAA TGACGGATGT ACTGAATGAG TTTCCTGAGT TGATTGACCC TAATACCGGA 3840

CAATCAATTA TGCAACGGAC AGTTCTGATT GCTAATACTT CAAATATGCC TGTTGCTGCT 3900

CGTGAGGCTT CAATTTATAC AGGAATTACC ATGGCTGAGT ATTTTCGTGA TATGGGCTAC 3960

TCTGTCGCCA TTATGGCTGA TTCAACTTCA CGTTGGGCAG AAGCGCTACG TGAAATGTCA 4020

GGACGTCTAG AAGAAATGCC TGGTGATGAG GGTTATCCTG CTTATCTGGG AAGTCGTATC 4080

GCTGAATATT ATGAAAGAGC AGGACGTTCT CAGGTTCTAG GGCTTCCAGA ACGTGAAGGA 4140

ACGATTACTG CTATTGGAGC TGTATCGCCA CCTGGTGGAG ATATTTCAGA ACCAGTTACT 4200

CAAAACACTT TACGGATTGT GAAAGTTTTT TGGGGGCTTG ATGCTCCGTT GGCACAGCGA 4260

CGTCATTTTC CTGCAATTAA CTGGCTTACA TCTTATTCAC TATATAAAGA CAGTGTGGGC 4320

ACTTATATAG ATGGTAAAGA GAAGACAGAT TGGAATAGTA AAATAACTCG TGCGATGAAC 4380

TACTTACAAC GGGAATCTAG TTTAGAGGAA ATTGTTCGTC TTGTTGGAAT TGATTCTCTG 4440

TCTGATAATG AACGACTAAC GATGGAAATT GCTAAACAAA TTCGAGAAGA TTATTTGCAA 4500

CAGAACGCTT TTGATTCGGT AGATACATTC ACTTCGTTTG CAAAACAAGA AGCAATGCTA 4560

AGTAATATTC TCACTTTTGC TGATCAGGCA AATCATGCTT TAGAGTTGGG TTCTTACTTT 4620

ACAGAGATTA TGGAAGGTAC CGTGGCAGTT CGAGACCGTA TGGCGAGAAG TAAATATGTT 4680

TCAGAAGATA GATTAGATGA AATCAAAATT ATATCAAATG AGATTACACA TCAAATTCAT 4740

TTGATATTAG AAACAGGAGG TCTATAAATG AGTGTTATAA AAGAATACAG AACTGCTAGT 4800

GAAGTTGTTG GGCCTCTTAT GATTGTTGAA CAAGTAAATA ATGTGTCTTA CAATGAGTTA 4860

GTTGAAATTC AACTTCATAA TGGAGAAATT CGTCGTGGAC AAGTTTTAGA GATCCACGAA 4920

GATAAAGCAA TGGTTCAGCT TTTTGAAGGA TCTAGTGGAA TAAATTTAGA AAAGTCTAAA 4980

ATTCGTTTTG CTGGTCATGC ATTAGAATTG GCTGTATCTG AGGATATGGT TGGTCGTATT 5040

TTTAATGGGA TGGGAAAACC AATTGATGGT GGACCAGATT TAATTCCAGA GAAATATTTA 5100

GATATTGATG GTCAAGCTAT TAATCCTGTA TCTAGAGATT ATCCAGATGA ATTTATTCAG 5160

ACAGGGATCT CCTCTATTGA TCATTTGAAT ACTCTTGTAC GTGGTCAAAA ATTACCAGTA 5220

TTTTCAGGTT CGGGCTTACC TCATAATGAA TTAGCTGCTC AGATAGCAAG ACAAGCGACT 5280

GTTTTAAATT CTGATGAAAA TTTTGCGGTT GTATTTGCAG CAATGGGTAT TACTTTTGAA 5340

GAAGCTGAGT TTTTTATGGA AGAACTCAGA AAAACAGGAG CGATCGATCG TTCGGTTTTA 5400

TTTATGAACT TGGCAAATGA TCCTGCAATT GAGCGTATTG CAACTCCCCG CATTGCTTTA 5460

ACTGCGGCAG AGTATCTAGC TTTTGAAAAA GATATGCACG TTCTAGTTAT CATGACGGAT 5520

ATGACTAACT ATTGTGAAGC GTTACGTGAA GTCTCGGCAG CTCGCCGTGA AGTTCCAGGG 5580

AGACGAGGCT ATCCGGGATA TTTATATACA AATTTATCAA CTCTATACGA AAGGGCTGGT 5640

CGCTTAGTTG GTAAAAAAGG TTCGGTGACA CAGATTCCTA TTTTAACAAT GCCAGAAGAT 5700

GACATAACAC ATCCAATTCC TGATTTAACT GGATACATTA CTGAAGGGCA AATTATTTTG 5760

TCGCATGAGT TGTATAATCA AGGTTATCGT CCACCAATCA ATGTTTTACC TTCTCTCTCT 5820

CGATTAAAAG ATAAGGGATC TGGAGAAGGT AAAACTCGTG GAGATCATGC TCCAACTATG 5880

AATCAACTGT TTGCAGCCTA TGCCCAAGGG AAAAAGGTTG AAGAGTTAGC AGTAGTATTA 5940

GGAGAATCGG CTTTATCTGA TGTAGATAAA TTGTATGTGA GGTTTACAAA GCGTTTTGAA 6000

GAAGAGTACA TAAACCAAGG ATTTTATAAA AATCGAAATA TAGAAGATAC GTTGAATCTT 6060

GGGTGGGAAT TACTATCAAT TCTTCCTAGA ACAGAGTTAA AACGTATCAA AGATGATTTG 6120

CTTGATAAAT ACTTACCTTT GGTAGAAGTT TAATCCGGAA ATGGAGTGAT TATCTATGGT 6180

ACGTTTGAAT GTAAAACCAA CTCGTATGGA ATTGAATAAC TTAAAGGAAC GTTTGACAAC 6240

AGCTGAACGT GGACATAAGT TATTAAAGGA TAAAAGAGAT GAATTGATGA GGCGATTTAT 6300

TTCTTTGATT CGTGAGAATA ATCAACTTCG GAAAGAAGTG GAAAGTTATC TAATTGATAA 6360

TCTAAAATCC TTTGCAGTTG CTAAATCATT AAAGAATTCT CAAATGGTGG AGGAATTATT 6420

TTCAATTCCA TCGAAAGAAA TTGAATTATT TGTTGAGAAA GAAAATATCA TGAGTGTAAC 6480

AGTTCCTAGA ATGCATATGA ATATTACTTC TCAAAATGAG AACAGTGAAT ACAGCTATTT 6540

ATCTTCTAAT AGTGAAATGG ATGATGTATT TGCTACAATG AATAGTTTAA TTTATAAATT 6600

ACTAAGACTG GCAGAAGTTG AAAAAACGTG TCAGTTAATG GCTGATGAAA TAGAAAAAAC 6660

ACGTAGACGT GTAAATGGTT TAGAATACTC GATTATTCCA AACTTGTCGG AAACTATTCA 6720

TTATATAGAA TTGAAACTAG AGGAGGCAGA AAGAGCCAAT TTAGTTCGTA TTATGAAAGT 6780

GAAGTAGATC CTTTATTTAG ATTATTAATT AGATGAACAA ATATCAGCTT GGATAAGGCT 6840

TTAAGCCTTT CTAAGCTTTT TTTATTGACA GTATCAGGAT ATCTTTTTCA AAATTTTGGT 6900

TTGTTAGATA ATGAAAATGT TTCTACTAAT CTAGATTTAG GATTAGTAAA TCGTAAATGT 6960

AATTATATAG AAAGTAAGCG CGTCATAACA AGGTATCTAT CATTCATGGA GCTCCTCCTG 7020

TATACTATTA GTAAAGTAAA ACTATTGGAG GATATTTTAA TGCCACAACC TATTGTTCCT 7080

GTAGAGATTC CACAATCTCG TCGTTTTGAT TCTAAAAAGA GAAATGATAT TCTGCTTAAA 7140

ATTCGTATTG GCAAGCTTGA AGTAAGTTTT TTTCAATCTC TCAATCTCGA AATGGTAGAA 7200

CAGCTTTTGG ATAAGGTGTT GCTCTATGAC AATTCATCTA TCTAGCCTAG GGGAGGTCTA 7260

TCTCGTGTGT GGGAAAACTG ATATGAGACA AGGAATCGAT TCACTGGCTT ATCTGGTTAA 7320

AACCCACTTT GAATTGGATC CTTTCTCCGG TCAAGTCTTT CTCTTTTGTG GTGGACGTAA 7380

AGACCGCTTT AAAGTCCTTT ACTGGGATGG TCAAGGATTT TGGCTACTAT ATAAACGCTT 7440

TGAGAACGGC AGATTGATTT GGCTAAGTAC AGAAAAGGAT GTCAAAGCTC TCACACCAGA 7500

ACAAGTAGAC TGGCTTATGA AGGGCTTTTC TATCACTCCA AAAATATAGT AGATTGAAAC 7560

TAGAATAGTA CACCTCTGCT TCTAAAACAT TGTTAGAAAT CGATTTTACT GTCCTGATCG 7620

ATTTGTCCTG TTCTTATTTC ATTTTACTAT AAATCCATCA GAAAGTCGTG ATTTCTATTG 7680

AAATGAGGAC TTTCTTTTTA TACTCATCTG CTTTCAAAAA GCATTCTAGT CCATCTCCGA 7740

TTAACGATGG ACTTTATCAC CTCCTTCTCC AGTCCTTGTA TAACATCTTG GAGTTGATTC 7800

ATGACATCTT CCAAAGTTTA AAAGGCTTTA TTCTTAAATC CACGTTTACG AATCTCTTTC 7860

CACACTTGTT CAATGGGGTT CATCTCTGGT GTGTATGGAG GAATAAATGC AAAGCCAATA 7920

TTAGTCGGAA TCTTTAAGGT ACTTGATTTA TGCCATATAG CATTGTCCAT AACGAGTAAA 7980

AGATAATCAT CTGGATAAGC TTGTGAAATC TCCTATTCCT AAAGCCCCTT TAGCGCATAA 8040

CTTTGGCTCA GCTTCTATTA TCGCTCACAC CATCCATCAG AAGTTTAATC TGAAGGTACC 8100

CAATTATCGC CAAGAAGAAG ATTGGGCTAG GATGGGTTTA CCAATCACAC GTAAGGAAAT 8160

CTCTAATTGG CATATCAAGG CGAGTCAATA CTATTTGGAG CCCCTTTATA ACCTCTTGCG 8220

AGAGAGACTA TTGACTCAGC CCTTACTTCA TGCGGATGAA ACTTCTTATA GGGTGCTAGA 8280

GAGTGATAGT CAGCTGACTT ACTATTGGAC TTTTTTGTCA GGTAAAGCAG AGAAACAAGG 8340

GATTACGCTT TACCACCATG ATCAGTGTCG AAGTGGTTCA GTAGTACAAG AATTCCTAGG 8400

AGATTATTCT GGCTATGTGC ATTGTGATAT TTTGCGGCAG TAACTTAGGA CTTTAGTCCT 8460

CTAGTTCTGC CTATGCGATA GCAGTCCAAG GTTTAGGAGC AAGGCGACGC TAAGCTTGGT 8520

AAACTTCGAA CCGCTCGTCT GCTTATCGTC AACTGGAAGA AGCTGAACTT GTTGGATGTT 8580

GGGCGCATGT GAGAAGGAAG TTTTTTGAAG CGCCCCCCCA AGCAAGCGGA TAAATCATCC 8640

TTAGGAGCTA AAGGTTTAGC TTATTGTGAT CAGTTATTTT CCTTGGAAAG AGACTGGGAG 8700

GCTTTGCCAG CTGATGAACG ACTACAGAAA CGTCAAGAAC ATCTCCAGCC CTTAATGGAA 8760

GACTTCTTTG CTTAGTGCCG GCGTCAGTCA GTTTTAGCAG GTTCAAAACT AGGAAGGGCA 8820

ATTGAATACA GCCTCAAGTA TGAAGAAACC TTTAAGACCA TTTTGAAAGA CGGACATCTG 8880

GTCCTTTCCA ATAATCTAGC TGAACGCGCC ATTAAATCAT TGGTTATGGG ACGGAGTAAA 8940

AGAGTCCAGT GGACTCTTTT AGCCTAAGCT CAGTTTAAAA AAGCGAGGGT GGTTATTTTC 9000

TCAAAGTTTT GAAGGAGCTA AAGCAAGAGC TATTATTATG AGTTTGTTGG AAACAGCTAA 9060

ACGTCATCAA TTAAATAGCG AGAAATATCT ATCCTATCTT CTAGAATGTC TTCCAAACGA 9120

GGAAACTCTC GTAAACAAAG AGGTTTTAGA GGCTTATTTA CCATGGACTA AAGTTGTACA 9180

AGAAAAGTGC AAATAAGAAA TCTCCAGATT AGGAACTATC CGTGAGTTCT CCAGTCTGGA 9240

GATTTTTCAA TAGACTTCCT GCGAAACAAA ATATGGTATA ATAGTTCTAT GAATGATGAA 9300

GCAAGTAAAC AACTAACCGA TGCACGATTT AAGCGTCTTG TTGGTGTTCA ACGCACGACT 9360

TTTGAAGAGA TGTTAGCTGT ATTAAAAACA GCTTATCAAC TTAAACACGC AAAAGGTGGA 9420

CGAAAACCTA AATTAAGTCT AGAAGACCTT CTTATGGCCA CTCTTCAATA TGTGCGAGAA 9480

TATCGAACTT ATGAACAAAT TGCGGCTGTT TTTGGTATTC ACGAAAGCAA CTTAATCCGT 9540

CGGAGCCAAT GGGTTGAAGT AACTCTTGTT CAAAGTGGTG TTACGATTTC AAGAACTCCT 9600

CTCAGTTCTG AGGACACGGT AATGATTGAT GCGACGGAAG TAAAAATCAA TCGCCCTAAA 9660

AAAAGAATTA GCGAATTATT CTGGTAAAAA GAAATTTCAC GCTATGAAGG CTCAAGCGAT 9720

TGTCACAAGT CAAGGGAGAA TTGTTTCTTT GGATATCACT GTGAACTATT GTCATGATAT 9780

GAAGTTGTTC AAAATGAGTC GCAGAAATAT CAGACAAGCT GGTAAAATCT TGGCTGACAG 9840

TGGTTATCAA GGGCTCATGA AGATATATCC TCAAGCACAA ACTTCACGTA AATCCAGCAA 9900

ACTCAAACCG CTAACAATTG AAGATAAAGT CTATAACCAT GCGCTATCTA AGGAGAGAAG 9960

CAAGGTTGAG AACATCTTTG CCAAAGTAAA AACGTTTAAA ATGATTTCAA CAACCTATCG 10020

AAATCATCTA AACGCTTCGG ATTACGAATG AATTTGATTG CTGGTATTAT CAATCATGAA 10080

CTAGGATTCT AGTTTTGCAG GAAGTCTATT ATCAAAAATA CCATCAAGAT TATATAAGAT 10140

TGATACAGGA AAAGTTTTAT TTGATGGTGT AAATATTAAT CAAATAGATA AAAAAATATT 10200

AAGTCAAAAT TTAGGAGTAG TTCCACAGGA TTCATTTTTA TTGAACCGAA GTATTCTTGA 10260

TAATATAACT TTAAAGCACG AAGTTACTTC ACAAAAGATA GAGGAAGTTT GTAAAGCAGT 10320

TCAAATCTAT GATGAAATCA TGGCTATGCC GATGAAATTT AATACTATCA TCTCAGAGAT 10380

GGGGTCAAAT ATTTCAGGTG GGCAAAGGCA ACGGATAGCA CTGGCACGTG CATTAATAAA 10440

TAATCCTAGT ATTGTAATTT TAGATGAAGC AACTAGTGCA TTAGACACTA TTAATGAGGA 10500

AAGAATAACA AAGTATATAC AAAGTCAGGG CTGTACTCAA ATAATTGTAG CTCATAGATT 10560

GTCAACGATT AAGGATGCGG ATGTTATTTT TGTAATGAAA GGTGGTAAGA TTGTTGAGTC 10620

AGGAAATCAT AAGTACTTAA TGGATCTTGG TGGAGAGTAC TACAGCTTAT ATACAAAAAG 10680

GAAATGAGGT GTAAAGAAAA TGAAGAAAGA AAATGAATAT GTAATTTTAA CAACAGCCTC 10740

ACTAGGGGTG ATGATTGGAA TAGTGTTTGC AATTTTTTTA GATTTTCCAG TTGAATATGG 10800

TATTTCTTTA GGCTTGTTGA ATGGAATAGT ATTGGGTTCG CTGATTGTTT ACAAAAACAA 10860

TAAGAATTAA GCATAATTTT TTGCTGTAAA CTAAGGAGTA GAGATGGCTA TAGTTGAAAT 10920

TATAAATCTA ACAAAAAGCT TTAAAGATAT TGAAGTTATT CATAACACTT AAATAATAGA 10980

GCAACTACAG TAGTAGCTTA AAAACATGAT TAAATCGCTA TTCTTAGGAG TAGCGGTTTT 11040

TCTTTTTGTT TAATACTCTT TGAAAATCTC TTCAAACCAC GTCAGCTTTG CTTTACCGTA 11100

CTCAAGTACA GCCTGCGGCT CGCTTCCTAG TTTGCTCTTT GATTTTCATT GAGTATAAAA 11160

AGGGTCAAGT AAGTATAGTA AATTGAAATA AGATATGAAC AAATCGATTA GAAAAGTCAA 11220

ATTAATTTCT AGAAATATGT TAGAAATTGG TTTGAATTCC GCAATCAATT TGTTCAGTTT 11280

TTATTTCATT TCATTTTATT TAATTAGATT TTCCAATTTT TTAATTCAAG CTAAAAATCC 11340

CCAATCGTAG TGATTGAGGA TTGAGTAAAT AAATCTTAAA CAATACCTTG TGCAATCATG 11400

GCATTTGCTA CATTTTCAAA GGCAGCAATG TTAGCTCCTG CAAGGTAGTC TTTATCAAGA 11460

CCGTATGTTT CTGAAGTCGT TTTAGCTGTG TTGAAGATGT TTGTCATGAT GTCTTTGAGA 11520

CGGCCATCAA CTTCTTCACG AGTCCATGAG AGGCGAAGAC TGTTTTGGCT CATTTCAAGA 11580

GCTGAAACGG CTACACCACC AGCGTTGGCA GCTTTTGCAG GTCCGTAGAA GATACCATTT 11640

TCTTTGTAAA CTTTGATGGC ATCAAGGTCG CTCGGCATGT TGGCACCTTC AGATACACAG 11700

ATAACGCCTT GAGCAACCAA ACGTTTAGCT GCTTCACCGT TGATTTCGTT TTGAGTGGCA 11760

CATGGAAGAG CAATGTCATA GTTTCCAGCG TAAGTCCATA CAGTACCTTC GTGGTAGGTT 11820

GCAGTTGCTT TTTCAGCTGC ATACTCAGTC AAACGAGCAC GACGTTTTTC TTTAACATCA 11880

ACCAAAAGAT CGAAGTCGAT ACCATTTTCA TCGATGACAT AACCATTTGA GTCAGAAACA 11940

GAAATAACAG TTGCACCGAG TTCAGTTGCT TTTTGAAGAG CATATTGAGC AACGTTACCA 12000

GAACCTGAAA TAACGACTTT CTTACCAGCA AAGCTGTTAC CGTTAGCTTT GAGCATTTCT 12060

TCAGTATAGT AAACCAAACC GTAACCAGTT GCTTCTGGAC GAATCAAGCT ACCACCAAAT 12120

CCAAGAGGTT TACCAGTCAA GACACCAGCA TCAAATTGGT TAAGACGTTT GTATTGACCG 12180

TAAAGGTAAC CAATTTCACG TCCACCAACA CCGATATCAC CAGCAGGTAC GTCAAGTGAT 12240

GGTCCGATGT GTTTTTGCAA TTCAGTCATG AAGCTTTGGC AGAAGCGCAT CACTTCAGCA 12300

TCTGTTTTAC CTTTAGGATC GAAGTCTGAT CCACCTTTAC CTCCACCGAT AGGAAGTCCA 12360

GTCAAGACAT TTTTAAAGAT TTGTTCAAAT CCGAGGAATT TCAAGATCCC TTGGTTTACA 12420

GTTGGGTGGA AACGAAGTCC ACCTTTGTAT GGTCCAACAG CTGAGTTGAA TTGAACACGG 12480

TAACCACGGT TTACTTGAAT TTTTCCATCA CGGTCAACCC AAGGAACACG GAAAGAAACC 12540

ACGCGCTCAG GCTCAGTAAT ACGTGCCAAG ATATTTTCTT CGATATACTC AGGGTGTTTT 12600

TCAAATACAG GTTCTAAAGT GTTGAAAAAT TCTTCAACAG CTTGGAGGAA TTCAGCCTCG 12660

TGCCGG 12666

(2) INFORMATION FOR SEQ ID NO: 138:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 3083 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 138:

AGCAACTGTT GTGAACCAAT TCCGATAAAT TCCAAGAATT GGTTAATAGA GCCATTTTGA 60

CCAAAAATCC CGATAAAAGC ATAGGCTTTA AGGAGCAAAT TGATCCAGGT AGGAAGGATA 120

ATCAGCATGA GCCAGAGTTG ACGGTGTTTG AGACGGGTCA AAAAGAGGGC CGTCGGATAA 180

CTGATAAGCA GTGCCACAAA GGTCACAATG CCTGCATAAA GCACTGAGTT GAAACTCATT 240

TTAAGATAGG TCAAGTTTTG TGACGCAAAG TAAGATTTGT AATTTTCTAA ACTGAACTGG 300

CCTTCGATGT TGAAAAAGGA TTGACCGAAA ATCAAGACCA AGGGTGCCAA TACAAAGAGC 360

GCAATCCAAA GCATGTAGGG TACTACAAAG AGTTTAGAGC TTGTTTTCTT CATCTCTTTC 420

CTCCTCGATT GCATTGATCA AACCTGCTTC TTGCTCTTCG ATTTCTACGT ACTCCTCAAT 480

ACGAGCATCG AACTCTTCTT CGGTTTCATT GAGACGCATG ATGTGGATGT CTTCTGGTTC 540

AAAGTCCAGA CCGATTTCCT CACCCACGAT AGCCTTACGG GTTGAGTGGA TCATCCATTC 600

ATTTCCAAGT TCGTCATAGG CGATAATTTC ATAATGAACT CCACGGAAAA GCTGGGTATC 660

GACCTTAACT TGGAGCTTGC CTTCTTCAGG AAGGGTAATG CGCAAGTCCT CTGGACGAAT 720

AACGACCTCA ACAGGTTCAT TTGGCTTCAT CCCACCATCA ACCGCTTCAA AGCGTTTGCC 780

GTTAAATTCG ACCAAGTAGT CCTCAATCAT GGTACCTGGC AAGATGTTTG ACTCCCCGAT 840

AAAGGTGGCA ACAAAGTGGT TGATTGGCTC ATCGTAGATG TCCACAGGGG TTCCAGACTG 900

GACAATCTCG CCATCATTCA TAACGAAAAT CCAGTCACTC ATGGCAAGAG CTTCTTCCTG 960

ATCGTGAGTG ACAAAGACAA AGGTAATGCC CAATCGTTGT TGTAATTCAC GCAATTCGTA 1020

CTGCATGTCT GTTCTCAATT TCAAGTCCAG CGCTGATAAA GGCTCGTCCA ACAAGACCAC 1080

ACGGGGTTGG TTGATGATAG CACGGGCGAT GGCCACACGC TGACGTTGTC CTCCAGAAAG 1140

TTTGCGGATG GAACGTTTTT CATAACCTTC CAACTGAACC ATCTTGAGAA CTTCCGCTAC 1200

ACGCTGCTCG ATTTCTTTCT TATCAATTTT ACGCAAGCGA AGTGGAAAGG CAACATTTTC 1260

AAACACATTC ATATGTGGGA ACAAGGCATA GGATTGGAAG ACGGTATGTA CGTCGCGCTT 1320

GTTGGTTGGA ATATCATTGA TACGAACACC GTCTAGCATG ATATCTCCTG TCGTCGCATC 1380

CAGTAAACCT GCAATAATGT TTAGGATAGT TGATTTCCCC GAACCAGATG CACCTAGAAG 1440

GGTGTAGAAT TTCCCTTCTT CCAACTCAAA GTTGATGTCT TTGAGAACCT TGGTGTTGCT 1500

GTCTTCAAAA ACTTTAGAGA CGTTTTTGAA TTCGATAATT GGCTTTTTCA ATTGGCATAA 1560

ATTCCTTCTT TTTCATAGAT TAACCGATCG GGGCTCTGTC AGGTCCCCAC TACCTCTTGC 1620

AGGGAGTAAA ACCACCTGCA TACATCTTCG CTACCGATAG GCTTTCACCC AAGATCCGGA 1680

CTTCTCTTTC AAGCGTAATA CCTGAGTGTT CCTTGACTTT TTCGATAACC GATTGGATCA 1740

AGTCCTCGTA GTCTTTGGCC GTTCCATCTG CGACATTGAT CATAAATCCT GCATGCTTTT 1800

CTGACACTTC TACGCCACCG ATACGATAGC CTTTCAAGCC AGCTTCTGAA ATTAACTGAC 1860

CTGCAAAATG CCCGACTGGA CGCTTAAAGA CCGAGCCACA AGATGGGTAT TCCAAAGGTT 1920

GCTTGAGTTC ACGTAGGTGC GTCAAGCGGT CCATTTCCTG CTTGATAACC TGATGGGTTC 1980

CTGGAGCTAG GGCAAATTTA ACTGACAAGA CAACTGCACC AGACTCCTGA ATAGCTGAAT 2040

GACGGTAACC AAAAGCCAAG TCTTTAGCAG ACAGGGTTTC GATTTCTCCA TCCTTGGTCA 2100

AGACCTTACA AGACTGCAAG ATGTGAGCAA TCTCGCCACC ATAGGCACCC GCATTCATAA 2160

AGACAGCACC GCCAACGCTT CCTGGAATAC CACAAGCAAA CTCAAAGCCA GTTAAACTAT 2220

GACGGAGGGC AATGCGAGTT GTTTCAATCA AGTTAGCCCC AGCTTCTGCT TCAATGGTAT 2280

AGCCATCAAC AGAAACGTTA TTGAGCTTGT CACACAAGAT GACAAATCCA CGAATCCCAC 2340

CATCACGAAC GATGATATTG CTTGCATTGC CAAGAACCAT CCAAGGGATA TTTTCTTGGT 2400

TGGCAAATTT CACAACGCGA GCCAACTCAA AACGATTTCG TGGAAAGACC AAATAATCAG 2460

CCTCTCCACC TACTTTTGTA TAACTATAGC TATGCAAGGG TTCCTTAAAA CGGATATCAA 2520

TTCCTTCTAA GATTTCAAGC ATTTTTTCTC TTACAGACAT GTCACTCTTC CTTTTACAAA 2580

ATTCATTCCA TTATACCATT TTTAGAGACA TTTGACGACC ATAAAAATAC CTTGTTTGGA 2640

TTTTGCATAA GAAAAAGAGG TTCCCCCCTT TTTATGATTT TTTACAAAAG ATTTCCTTGG 2700

TTCCATAGGC GACCAGAACG AGCTCCAGTG CTAGAATCAC TTCAACCAAG ACTGGATTTG 2760

TCAACCAGCC TACTTGGAAA AGAGATGGTG CCAGATCAAA GAAGGCATGC AAGCCATAGG 2820

CTGCTAGGAG ATAAATCCAT TTCTTCTGGC GAACAGCTTG GTAAACCCAA ACTGTCAAAA 2880

GTAATTGGAA ACCAAGCGCC AAGATTCGCT CAAAACCAAG CAAATAAATC TGCCAGACCG 2940

AAAGTGACTG AATGGTTTTT AACATATTTT CAGACAGTAA TTGCATAACC TGTGGATTCT 3000

GAGTTTGAAC TGCCGAAAGA ACAATGTAAA GATTGAGTAA ACTAGTAAGG CCTAGAAAAA 3060

TCAACTCCAA GCCACCATGC CCC 3083

(2) INFORMATION FOR SEQ ID NO: 139:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 15363 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 139:

CCGGAGGATA TTGACCACCA CCAAAAGCAG GGGGAAAATC GAAATCAACC AATAGTAGGC 60

TACTGCGACA CTGGTCAACT CACTATCTGA TGCTTGATAA TAATGCAAAA AAGCTTTTAA 120

TAAAGGTTTG TCTATCAGCT CTTTCCACCA CTTTTTCATG TCATACTCCT TCACTTATAA 180

TCTTATACTC AATGAAAATC AAAGAGCAAA CTAGAAAGCT AGCCGCAAGC TGCTCAAAAC 240

ACTGTTTTGA GGTTGTAGAT AAGACTGACG AAGTCGATCA CATACATACG GTAAGGCGAC 300

GCTGACGTGG TTTGAAGAGA TTTTCGAAGA GTATTAACTA ATTTCTTCTT ACCAATTCCA 360

CCATATCATA CGGTAGGGTA TTGGCAGCTT CCTTCAAGGA ATAGTTCTCT AAGTTATTTA 420

CATTTTGTCG TAATTTCTTG GCATACTTAG TCGTAATCAA TCGTTTTTCT TCGTATTCGA 480

AAATCAACTT GCGCTCCAGA TAATAGCCTC TCAGCATTTC ATCGATATTG TTGGGTTTGA 540

CACGATTGAT AACCCGTTCG ACAAAGGCAC CACTGCTGAT AATAGCTGTT TCTCGAAGAC 600

GAGACTCCTG CATAAAACTA ATCAAAGAGC GTCTGTAGAC TCCCTTCAGG TTTTCCAAAC 660

TTTCAATAAT CATCTCTGTA TTGGCAAGAT AGAGCTCTGC AATTTGGTCA TAATCAAGAG 720

CACGGAGACG GCTTTGCTCC TTGTTCTTCC AGCTACGGAA GGTCTTTCCG AGAGTAAAAA 780

CTTCATGAAG GAGAAAACGT AAAATCCTCA AGGAAACAAG AAAATAATAG GTCAGTCTTG 840

AGGCAAGTTT ACGATTGATT CCTTGTTCTA TATTTTTCAG ATAACGTTGG TAAACTCGGT 900

AAGCACGATT GCTAATGTTC CCCTCTTCAT AGGCCTGTTC CAAACCATCA CTTTCAATAC 960

TAAGAATCAA GAGTTTCAAA GCAGCCCAGT CTTCTTGATC ATCCTGGTTT TCTTGGCTTA 1020

AAATGAGATT TTCAATACGT CCATGATAAT TGTCAATAGC CGCATAGAGG GGAAGTTTAT 1080

TTCTGGTGTC TTCCAACTCT TTTTCCAACT CTAGCGTTAC TTCATTCAAA ATGGCGATAT 1140

GCATAAGATA ATCCTTGCTT TCTTCCTCTT CATCAGAAAG ATGAGGCAAG ACCAAGAGAC 1200

CTGTTAAAAA GCTAACAAGC GTCACACCTG CAACAAGGAA AAGCAAAAGA GGATACTCCT 1260

GTTCTAGATT ACTTGGTATC AAGAGAATCG TAGCAATCGA CACCGTTCCC TTAACACCTG 1320

AAAAGGTCAA GAGAAACATG TCCTTCATAT ACTTATTTAG CTTTTTCTTG AGGCGTCGGG 1380

TTCTATAGGC ATAATAGCCA TAGATCATAA TAAAACGAAT GACAAAAAGG ACAAAGGTAA 1440

GGGCGATAAG AGATAGCAAT AAAAGTAGAG GATTATAGAT TGGATTGGTC AAGATAGGTT 1500

CTGCTATCAT TTCCAACTCC ATCCCTAAAA TCACAAAGAC AGAACCGTTG AGCATAAAGG 1560

TCACTGTATG CCAGACCGTC TCGGTCACCG TATCCACTTG GGCTTCGAGG AGCGTGATTT 1620

TCTTGAAGCG ACTTGCCTTT AAAATTCCAG CAACTACGAC GGCAATAATA CCTGAAACAT 1680

GAACTTCTTC TGCCAGAAAG AAGGTCACTA GAGGCAAACT CAATTCTAAT AAAAGTTCAC 1740

TGGCAATATC CGTTGCGCGC ACACTTAGCA AGAAGGTATG GAGGAAGCGG TTGGTCATGG 1800

CTGTTAAAAA TCCAATTAAA AAACCGCCTA GGATTGAAAA GATGAGCGAA CTGCTAGCTT 1860

GCCCCAGAGA AAAAGCTCCA GTTGTCCAAG CTGTCAAAGC TACCTGAAAA GCCACCAAAC 1920

CAGAAGCATC ATTCAAGAGT CCTTCGCCCT TAAGAATATT GGACACGCGC TTAGGAAAGC 1980

TAAAACGCTC CGAAAGAGAG GCAAAGGCCA CCAAGTCCGT AGGACCAAGG GCTGCCCCAA 2040

CAGCCAAGCA AGCTGCCAAG GGAAGGCTGA ACCAAAGAAG ATGGGCCAAG CCACCCAAAC 2100

TCAGGGTCGA GATAAAAATC ACTGGAAATA TGAGATAAAC AATGATTCGC CAGTGTTTTA 2160

AAATAGCCGT AACATCTGCT TCTTCAGCCT CTCGGAAAAG CAAGGGTCCG ATAACCAGTG 2220

CCAAAAACAA CTCCGTATTA AGGTGAAAGT CAGTATTGGG TAAAAAGAGA CCAATCACAA 2280

TTCCCAAAAG AATTTGCACC AAAGGGAGAG GCAAAAAGGG CAGGAGCTTA TTGGTTGTAC 2340

TTGAGACAAT CAAAACCAGT AAAAATAGGA TGAGGTAAAT CAGTAATTCC ACGCACGTCC 2400

TCCTTAATCT TTTTTACAAC AGGATTCAAA TATCTCCTTC TGCTCTTTGA TTTTTTGGTC 2460

AATCTTGGAA CAGTCTTTGT GCTCAATTTT TCTCTGGCAC CGTTCCATTT CAAGAGCAAC 2520

TAATTTTTTC TTGATTTTAA GCATTTTTTT GCTCATATGC GCTTGGTCTA GCACGCCCAT 2580

CGCTCGTTCG TGGTGGGTTG ATTCAACAAA ATTCTGGCGC ATGGCATCCA GCTTTTCGTG 2640

TAAGTATTGT TTATCCATGT CTGTATCTCT CTAATTTTTC AATCATCACT AAAAACGGCG 2700

GGTTGTTGAC TTGGTTTAAA GTTCGGTAAA TGGCAGCTGT GTACTCTTGT TGGTTCAACT 2760

GGATCACAAA ATCCAAGACA GCATCTCTCT CGAGATCGCC TCCTTCATGA CCATAGTAAA 2820

TCATAATAGC AATTCGTCCA CCTTTGACAA GTAAGCCACA TAGCTTTTCT AATGCCTCAA 2880

TCGTTGTCTG CGGTCGGGTG ATGACAGACT TATCAGCTGC CGGCAAATAG CCCAGATTAA 2940

AAATCCCTGC CTTAGCTTTT ATCACAAACT GGTCCAGTGT CTCATGGCCT TGCAAGATTA 3000

ACTGGGCATT TGTCAAGTCA GCCTGATGCA AACGCTCTTG GGTCTTTTCC AAGGCTTGCT 3060

TCTGAATATC AAAGGCATAG ACTTGCTTGG CTAGCTTGGC TAAAAAAAGC GTGTCATGAC 3120

CATTTCCCAT AGTCGCATCC ACTACGACAT CCTCTTTTGT CACGACCTCA GCCAAAAAAT 3180

CATGTGCCAT CTCAAGTGGT CTTTTCATTT TCAAACTCCT GTTTTACAGC CTTGCATCCT 3240

TGAACACTTC CACGACGTCG CATCTCCATC TCAATGCTGT TGAGGACTTC CCATTTATTG 3300

AGGCTCCACA TAGGACCAAG CAGCATATCC CTAGGCGCAT CTCCTGTAAT TCGATGGATG 3360

ACGATATGTT TGGGAATAAT TTCCAGTTGG TCACAGATGA CCCTGACATA TTCGTCCTGA 3420

CTCATCAATT GTAAACGCCC CTCATGGTAA TCTCGTTGCA TACGAGTATT TGTCATAAGA 3480

TGGAGCAAAT GCAGTTTAAT CCCTTGAATA TCGTTATCCG TGACACAACG GCGGACATTT 3540

TCAACCATCA TCTCATGGGT TTCACCAGGC AAACCATTGA TCAAATGGGA AACAATCTCA 3600

ATTTTTGGAT ACTTTCTCAA ACGCTTGACC GTTTCCACCT ACAATTCATA AGAATGCGCA 3660

CGGTTAATCA GGTCAGAGGT TGCTTCATAA GTAGTTTGCA AGCCCAATTC AACCGTCACA 3720

TGCATGCACT CCGATAACTC AGCCAAATAT TCGATGGTTT CGTCTGGTAA ACAGTCTGGG 3780

CGCGTTCCAA TATTGATTCC TACCACACCT GGCTCATTGA TAGCCTGTTC ATAACGCTCT 3840

CGAATAACTT CCACCTTTTC ATGGGTGTTG GTAAAATTTT GAAAATAAAC CAGATACTTC 3900

CGAACATCCG GCCACTTGCG GTGCATAAAG TCAATTTCCT TATAAAATTG CTCACGGATA 3960

GGCGCATCCG GTGCCACAAT GGCATCTCCA GAACCAGAAA CCGTACAAAA AGTACAGCCC 4020

CCATGAGCCA CAGTCCCATC ACGATTGGGA CAATCAAATC CCGCATCAAT AGGGACTTTA 4080

AAAGTCTTTT CTCCAAAGAG TTTTCGATAA TAATCATTCA AGGTATTATA AGATTTCATG 4140

ACTTTCATTA TAACAAAAAT CACCCACAAT CTCAAAAGCC TGACTTTCCT ATAAATTCCT 4200

CTGTTTCTCG TTTCCATTAG CCTTTTTTTA TGATACAATA TGGGTATGAT TTTAATGAAA 4260

TTAGCATCTA TTTTATTATT GATACTGACC TTAGTCGTCT GCATTATCCT AACCAAACTT 4320

TTTAGATTAA AAAAACTAGG ACGAAACTTT GCGGATTTGG CTTTTCCAGT CTTGGTATTT 4380

GAGTATTACT TGATTACAGC TAAAACCTTT ACCCATAATT TCCTCCCTAG ACTGGGGCTA 4440

GCCCTCTCGA TCCTAGCCAT TATTCTCGTC TTTTTCTTCC TTTTGAAAAA ACGCAGCTTT 4500

TACTACCCTA AATTTATCAA ATTCTTCTGG CGTGCAGGAT TCTTATTAAC CCTTATCATG 4560

TATATAGAAA TGATTGTTGA ATTGTTCTTA ATGAAATAGT CGAATCCCTA AGCATTTTCT 4620

AGGGATTTTT GCTTTCTCTA CAAAATAGTA TAGACAATAA CACTATACAA TTTTATACAA 4680

AGAAAAGAGT CTGGGACAAT AGTCTCTTAT ATCCAAAAAG GCAACGGATT TGCCGTTGCT 4740

TTTTTGGATG GTTACGATAG TCTTGGTAAA ATAGAATTGC CCAATAAACC ATTTAGAAAG 4800

GCTATCCCAT GCATATTCAC TATAACACAA ATCAAACAAC TTTACCACTA GAAATCAGTT 4860

CCTTCTTACC ACAAGATCAT CTCGTTTTTA CTATTGAAAA AGTGGTGAAT ACCTTGGAGG 4920

AACGTCACTT CTACACCTCC TATCATGCCT TTGATCGCCC GTCTTATCAC CCTAAAATGC 4980

TTGTATCTAC TCTTCTATTT GCCTATTCAC AAGGGATTTT CTCTGGTCGA AAAATTGAAA 5040

AATGGAAGAG TTAGTGACCT TAGATTGTTT GTTTATTGAC AGAACTAAGA TTGAAGCCAA 5100

TGCCAACAAG TATAGTTTTG TGTGGAAGAA AACGACAGAG AAATTCTCCG CCAAACTTCA 5160

AGAACAGATA CAGGTCTATT TTCAAGAAGA AATCACTCCC CTTCTGATTA AATATGCCAT 5220

GTTTGATAAG AAACAAAAGA GAGGGTATAA AGAGTCAGCT AAAAACTTAG CGAATTGGCA 5280

CTATAATGAC AAGGAGGATA GCTACACACA TCCTGATGGC TGGTATTATC GTTTTCACCA 5340

TACCAAATAT CAGAAAACAC AGACAGACTT TCAACAAGAA ATCAAGGTTT ACTACGCCGA 5400

CGAACCTGAA TCAGCCCCTC AAAAGGGACT GTATATGAAC GAACGCTATC AAAACTTGAA 5460

AGCTAAAGAA TGTCAGGCGC TTTTATCTCC CCAAGGTAGA CAGATTTTCG CTCAACGCAA 5520

GATTGATGTG GAACCTGTCT TTGGGCAGAT AAAGGCTTCT TTGGGTTACA AGAGATGTAA 5580

TCTGAGAGGG AAGCGTCAAG TGAGAATTGA CATGGGATTG GTACTTATGG CCAATAACCT 5640

CCTAAAATAT AGTAAAATGA AATAAGAACA GGACAAATCG ATAAGGACAA TCAAATCGAT 5700

TTCTAACAAT GTTTTAGAAG TAAAAGTGTA CTATTCTAGT TTCAATCTAC TATACAATAA 5760

GAGAATGACT CAAAATTAAA AAGCTAGAGT TCCACAATTG GAAATATCTA GCTTTTTTGT 5820

GGTTGAGAAC TATTTTGTCT CAGGCTCTTT ATCTTCTATT TAGGACAAGA GTTTTTCTTT 5880

GGTCTTTAAT GATAAAGAAG GTATCAAAAT TTCTAGTCTT CTTTTTTACC TTTAGTAACT 5940

ACTAATCCTG CACTCAAACC TAGAAGAGTT AAACCTGCTG CTACTGCTGC TTGGCTTGCC 6000

GCACTACCTG TACTTGGTAA CTGGGCTTTA TTAGTTTGAC TAGCTTCACT TGAATCAATT 6060

GGTTTTGTAT CTGCTTTTTC TGACACTTGT GGTTTTTTAG CTTCTTGAGC TACTGGTTTG 6120

GTTCCAACCA AGACGATGCG GTCTGTCGGA ACTTCTACCA CTTCACGGAG TTTTTCTTCC 6180

TTACTTCCAT CAGGATTAAT CGCTGTAAAG ATACGTTCTT TTCCAACTTT TCCTTCTTGT 6240

TCTACACGAG TTTCACCTAG ATACAGTGTT GAATCTTTTT TCTCAACTGT CTTGTATGCC 6300

AAATCTTTTT CAACAAATTC GATTTTTGGA AGATCTTCTT GTACAGCAGC AACTGTCTTC 6360

TCAGAAACTG GTTTTTCCTT AGTCAAGTGG ATACGGTATT CCTTGACTTG TTTTCCACTT 6420

TCTGAAACGA GGCGAACAAG TACTGGAAAG CTATCTTCTC CACTATCTAC CACAGTTGAA 6480

GCTACTTGAT TGTTTTCTTC AACTGAGACT TTTGGCCGTT GACCTTTATA GGTAATTTGA 6540

TAGTCTTGAC GATTTTCAGC GAAATCAGCA AGTTCTTTTC CATCTACAAG AATCTTTGAT 6600

TGAGTGCTTT CTTGAGGCAA TTCACTTGGT GCAAGGAAGG TCATCTCAAT CATCGCAACA 6660

CCGCTCTTAT CTGCTTTACG CTCCATACGC CATCTCATAG CTTTGGCTTT GATAGCTTTA 6720

AATGTTACGT TGATTTCATC ACCAGCTGCA ATGTCTTTAT CCGCACGATA AGGAACAGCT 6780

TCCCAATTTT CTGGATTGTT GAATGGATGG TCTGCGTCGT AGGCTTGGTA GTTTGAATAG 6840

TAGGTTGGCA CTTCAAACTC TGGACCGACA TAGCGTTCTA AAACGAGTTT AGATGGTGCA 6900

TCCGTACCAC TATCTGCAAA GAACTGAACT TTTCCTTGTG TAACAGTCCG TTCTACAATC 6960

TTACCATTTT CACGGAAAAT CACACCCGCT GATACTTCTG GATTAGAAGA TGGTGTTGGT 7020

GACCAGTTTG TCCAACGACG ATTTTCTGAA TGATCTCCGT CATTGAGATA GTCAACGCGG 7080

TCATGAGAGT TTTTGTCAAT ATCATTGGTT GCTGAAGCAA AGGCCTGGTT ACTGTTTTCA 7140

TCATAGTTAG GGTTATCTGA AAGAGTCTCA CCAAGTTTGT CTGTCACTCG TACAGTGATC 7200

TCAGCAACAA GGTTACTACC AAGGACACGG CCTCGAACAG TAAATTGACC TGCTTTTGTC 7260

AGATTTTCCG CTGGAACTTC TTCCCATTCA ACTGTCAGGT CTTTTGTTTC GTAGCCGTCT 7320

TTACCTGTGA AGTAAACTGG AACCTTAGTC GGCAATTCAA GTGCTTGACC TACTTGTAGC 7380

AAGCGAGCTT GTTTAACCGC AGCAACTGGT TTATGAGAAA GTAAGCTCTT ATCCTTAGTG 7440

AAGTGCAGAC GGTATTCTCC TAAGATGTCG CCATTTTCAG CTTTCGCGAT GACACGAACT 7500

GGCTCACCTT CACGAACGCT TGGAACGACG GTAGCGAGAC CATTGTTGCT AACACTTGCT 7560

GTGACTGCCG GAACTTTTCC ATCTACAGAC TCAAGGTAGT AGTCTGTCAA ATCAGGGTTG 7620

AAGTTTGCTA AGTCTTTGCC GTCAACTTGG ATTCTTGTTT GTCCTTGCTT GGCTGCCGCA 7680

ACTTGTTTCG CAAAGATTTG TACCTCTGTG ATAGACGTTC CACGCTTGTT ATCTGCTTTA 7740

ACCATGCGAA TACGAACAGC ATAGGTTTCA ACTTTATCAA AGCTAAAGTG GTTCATTTCT 7800

CCAGCCTTGA GTTGAGCAGG GGCTTTTAGA TTAGTAACTG GTTTCCAGTT GGCAGAATCA 7860

TTAAAGACAT GGTCCTCATT ACCAACAAAA CTAGGGTTTT TAGGAGCTGT TGGGACAGTC 7920

TTACCAACAT AATACTCAAT CACATAAGAC TTCGGTACAC CAACTCCATG GTCTTCATGG 7980

AATCCGACAC TTAGATTATC AACGGAGCGT TTGCTCAAGA TACCTGAATC TCCAAACAGA 8040

ACACCGACTG AAGCTTCTGG ATTAGTACGA TTCCAGTTTG TCCAACGATT GGCTGGTTGG 8100

TTATTGTAGG AAATGAGCTT GTCATTAACA TTTGAAACTG GGTCGCTTGG ATTTGAGTCT 8160

GAAGCAAAGG CAAGTGGCAA TTCTGAACCG GTCCATTGGT CAGAAATGTT TGCACCTTGC 8220

TCAGTTTGAG CAGATACGCG AACATGAAGT TTAGTTGTTA ATTGCGTACC TTCTAAGCGA 8280

CCATTAACTG TAAAGACACC TTCCTTAGCG TATTGCTCTG GACGAATCGC ATCCCATGCA 8340

ACCTTAGCTG ATGAAACGTG ACCATTTGAA TCATATGTCC GAACACTTTC TGGTAATTGT 8400

GGTGCTTCTG CGATTGGAGT TGTCACACTG ACTTCTTCAA CTGAAACGAT ACCTTCTACA 8460

GAGACTTTTG CACGCGCTTC AAGGTCAATT CCTTCAACTT TACCTAGTAC TTCAAATGTT 8520

TGATAGGAGT CTAGTTTTTC TTTCGGAATA GCTTGCCAAG TGACTTTATG AGTTTTAGGG 8580

AAACCTTTGT CATACTCAAC TGTTACTGTT GCTGGAAGAC TTGGTTCCTG ATGCAAATCT 8640

GTCACTACAT TTACAGGACG GATGGATTGC GCAATCTTCT TCTCAGTATT GGCTTGGATA 8700

GTGAGTTCAA CTTGGTCTTT AGCTCCCTCA TATTCAGCGT TCAGAGTGAC TGCTCCTGGC 8760

TTATGCAACT CAAGCATTCC TTTACGAATT GCGACTTCCC CTTCACCACT TGTAGAGAAG 8820

GTTACTTTAT CAGCTGGTAA TACAGCTTGC GTTCCATCTT GATAGTGAGC TCGAACCGAC 8880

AATTTGACAG TTTGGTCTTC TTTGAGACTG TCAGCTTTTT CCACTTGCAA GCTCAAGTGA 8940

GCAATTTTTG GCGCTTCTTC AAGGAATTGA ATTGCATAGG TTTGAAGAGG GCCACCATCT 9000

TTAGGCTGAA TAAAGATGCT CGCACGCATG CCGTTTGCTG CGCTTGCTTG AAGAACTGTA 9060

ACAGCTGCAT TTTTAGCACT TGCTGTGACT TCTGGCAACT TAGCTCCATA AGCAAGAGTG 9120

CGGTATTGCA TTGGTTTTTG ACTAGTAAGA CCTGTTACTG CCTCACCACC AACCGTTACA 9180

GTTGGTACTG CAGGTGCCGC AGGATTGCCT TCTTCTACCA CAAGGGTTGC ATGAATTGGT 9240

TGACCTTCTA AATAACCGGT CGCTTGAATA CGAGAACCTG GAATTGCTAA CTTAGCTTTA 9300

TCTTCTTCGG CAATCTCCCA CTTGTCCACT TCATACTCTT CAACACTTCC ATCAATCAAA 9360

ACATAGGAAA CAGATTTGTC TACAGAATTC AAGTCAGTAT TTGGAGCAAT ACGTTTCACA 9420

ACTGGTAGCT CTGATTTAAG AGCAATCACT TCTACACGAG CTTCTACTTC TCGTCCGTCA 9480

GCCATACCTT TCACCGTTAC AATACCAGGC TTGCTCACAT CTACTGAAGA CCAGGTTACA 9540

GGACGTTCTG CACGGCTACC ATCACTGTAT ACAAACGGAA CAGTGGTAGG CATTTCAGGT 9600

GCCTCTCCAA TAATGGTCTG TACTTTTGGC ACTTCTGTCC CCAAAACAGT CTTCTCTTGT 9660

CCTTCTTTCT TACCAGTAAA GACAGTGACT TGGTTCGATT TCAAGAGATC AGAGTGGGCA 9720

GTCAGGGTGA ATTTCCCTGC TTGTTCAGTT GATTTGACAA TGGCAACACC TTTACCATTA 9780

AATGCTTTAC GAATCCAAGA ACCATCTGCT TGCGCCTTAT AGCGTTCACG GCTGGCTTGT 9840

TCTCCGTTAT CTACACCGAC CAGTTGACCT TGGCCATGCA ATTGGAAGCG AACCAGATTA 9900

TTAGCAGTTG GAACCACATT CCCCTGGCTG TCAACAATTT CATAGTAGAT GTAAGTCAAG 9960

TCTTTTCCAT CTGCTGCAAT CGCATGGTCT TCCTTAATAA GACGAACTGC CGCTGGCTTA 10020

CCAGCAGTCG TAATCTTATC TCGAGCAATT TCCTTGCCAG ATTCATCACG AGCAATTGCT 10080

TCCAAGGTAC CTGGTTGATA GGCAACTTTC CATTCAAGAT AAAGTTCATT AGCATTTGCA 10140

CCTTCTTGGT AAGTCCGCCC ATCGCTGGTT TGTTTTTTAT TGAAAGTCTT AAGACCAAGA 10200

GATTTTCCAT TCAAGAACAA TTCTACACTA GAAGCATTCG AATAAGCACG AACTGGAATC 10260

TTACCTTCTG AGTCAGCTAC TTTGGATGCT AATTCTTTGT TTTCCCAGTT CCAGTGAGGA 10320

AGAAGGTGTA CCATCGGTTT CTTCTTAACA GAAACCCATT GGCTTTGGTA GAGATAGAAG 10380

TCATGTTTTG GAATGCCGGC TGTATCTACG ATACCAAAGT AAGAGCTCTT AACAGGAGTT 10440

TGATTTTGGT TGTGCCATGG TGTAGGTTCA CCAATATAGT CCGTACCTGT CCAGATAAAC 10500

TGTCCAGCAT AGCCAGCGTT GTCACGGTCA AAAGTCCATG AAGCGGTTGC TGTTTTCCCC 10560

CAACCCACAC GATCATTTCC ATAATCTGAC TGTTCATAAT TACGCTCAGG TCCATTGCTA 10620

TGTTTCAATT CACGTTCAGG GCGATAGTAA CTTCCACGTG TACGGGTAGC TGAAGATGTT 10680

TCTGATCCAT AAATCAACCA TTTTGGATGC TTAGCTCTAA GGGCTTTGTA ATTATCTTCA 10740

GAATAGTTAA ATCCAACAGC ATCGAGTTCA TCAGCAATTT TCTCATGCCC TCCGCTACCA 10800

TTACCGAAAC GGAATTTATC TGCTCCCATG GTAACATAGC GAGTCTTATC AACATCCTTG 10860

ATAACCTTAA CCAAACGTTT AACAGTTGCT AAAGAGTGGG CATCACCATT AGCTTCACCT 10920

ATTTCATTAC CAATTGACCA CATGAAGATA GCAGGGTTGT TTTTGCCTCT TTCGACCATG 10980

GTACGTAGGT CAAAATCAGA CCATTTTTCA CCTTTTCGAG CTTCTGGGTG AGTGGCATCT 11040

TTTTCAAAGA AACGTCCATA GTCATAAGGT TTCTTGCCAC CATACCACGT ATCAAAGGCC 11100

TCTTCCTGAA CGAGTAAACC TAGTTCTGCT GCGATTTGCA AGGTTTGCTC ACTAGCAGGG 11160

TTGTGGGTTG TACGGATGGA GTTAACTCCC ATCTCCTTCA TTTGTTTGAG ACGGCGATAT 11220

TCTGCTTTAT AGTTTTCTTC TGCTCCAAGC GCCCCATGGT CGTGGTGCAA GGATACTCCA 11280

TGGAATTTAA TACGTTCACC ATTCAAAGAG AAACCTTCAT TTGGAGTCCA GTGATAGTAA 11340

CGGTAACCAA ACAAATCCTT CTTAGCATCA ACCAATTGAC CGTCACGGTA AACACGCGTA 11400

ATCAATTCGT ACAAGGCAGG TTTGTCATTT AAAACAGTCC AGAGTTTTGG TCTTTCAACT 11460

TCTAAAATCG CATCTAGGCT TGTTGATTCA TGTGCTTTTA AGGTACGACT CGCTGTACGA 11520

ACTAAGCCTG TTACAGCATG ACCACCTCGT TCAACGATTT GATATTCGGC TACAAGTTCA 11580

TGGTCTTTGT CGTCCGTATT GACGATTTTG CTGGTCACAT GAGTTTCAAC CTTGCCATGT 11640

TGTTGTTCTT CAAGTTTTGG TGTTAAAATA GTTGTCCCAT TTTTCTCAAC ATGCACCTTA 11700

TCTGTCACTT GTAAAGTCAC ATCACGATAG ATACCACTTC CTGAATACCA ACGGCTACTT 11760

GGCTGTTTGT TGACTGCATG GACAGCAATC ACATTCTCAC GACCATCTTT TTGAAGGTAT 11820

TTGGTGATAT CATATGAGAA CTGGTTATAA CCATTTGGAT AATGCCCCAC TAACTGACCA 11880

TTGACATAAA CTTGAGAATC CATGTAGACG CCATCAAAAG TAAGGCGAAC ATTTTTCTTG 11940

AGGTCTTTTT CATCTAGTTT GAAAGTCTTG CGATACCAAG CTTCCCCACC GTTGAGCTGT 12000

CCACCTTCAT TTTGTGCAGG AGATTCATGA TCGAAATCGT TAAAGATACT CCAGTCATAC 12060

GGTAAATCTA ATTTTTTCCA CGTAGATACG TCTGCATCAG GTTTAATGGC TTCCTTAGAA 12120

TTTGCATTGA GTTTAAAGTA CCAATTTTGA TTAAAATCCA CTTTCCTGTC TTCAATCATT 12180

TGATTCACTT CTTCATTTGT TACAGCTTTA GCATCTTCCT TGAGCGGTTT TTCTTGATTT 12240

GAAGCTTGTG ATTCTATCCT TGGAGCTTTT TCTTCCGGTT TAGCAGACAC TTTTTCCTCT 12300

TTTGGAGTTA CGGCTTCATC TTCTTTCTTC TCAGATGCAA TAGCCTCAGT TGAACTAGGT 12360

TCACTTTGTT CTGTCCTTTC AACTATATTT TTAGTTTCCA AAGCTTTATC AGCCTTTTCT 12420

TCTACTATCA TTTTTTCCTC TTTAGGTTTC TCAGCAGTAT GAGTAATAAG TGTTTCATCC 12480

GCATAAACTA CAGATTCTCC AGCTATATTT CCTCCTAATA AAACTGCACA AGTCCCAATC 12540

ATTACTGAGC AAGCTCCCAC AGCAAACTTA CGAATGCTAT AAACTCTTTT CCGATTCCAA 12600

TGGCCTTTCC CCATAAAACC CTCCTTATAT TATATTTAGT GCAGTTAGCT ACTACCAAAG 12660

CCCAAGTGGT ATACATGGTA TGACAACCTA GTTTCAACAA TTTACACTCT GCGAAAATCC 12720

AATTCAAACT TCGTCAGTGT CGCCTTGCCG TAGATATGAT TACTGACTTC GTCAGTTTCA 12780

TCTACAACCT CAAAACCATG TTTTGAGCTG ACTTCGTCAG TTTCATCTAC AACCTCAAAA 12840

CCATGTTTTG AGCTGACTTC GTCAGTTTCA TCTACAACCT CAAAACCATG TTTTGAGCTG 12900

ACTTCGTCAG TCTTATCTAC AACCTCAAAA CTGTGTTTTG AGCAACCTGC GGCTAGCTTC 12960

CTAGTTTGCT CTTTGATTTT CATTGAGTTT ATATTTTATA GGAGCGCATT ATTTTGCTTT 13020

TGCTGCGTAC TCTTCGTTAC GTTTGATCAT TTGTTTTCTG TACCAAGCAA AGATACCGAT 13080

ATAGAATACA AGGAAGACTA CTGCACCAAG GATTGCTTTG ATATCACCAG TTGTAGTGTT 13140

ACCAATTGTC CAACCAAGAA GTTTTTCGAT TGGTCCTTCA AGAGTAGAGT GAGTAATCAA 13200

TTGAGTTTGG CTCACACCTT CTGGGAAGGC ACCTACACCT TTAGCAAGTT CTGTTGCAAA 13260

TGGTGCAATA AGTGTACCTG AAAGAAGGAA GAGTGGCAAC AAGAGTGTTC CGAAGATAAT 13320

CATACGGAGC AATTTACCAC GAGTTACAAC CAAGAGAGCT GGAGTAACAC CCATAGCGAT 13380

GATACCTGCA AGTGGCAAGA TACCATTTCC AACTTTTGAA AGAAGCACTG CTTCAATCAA 13440

CATGATTGGT GCAAGTACGT TGGCACAAGC CCAGATTTCA GCACGACCAG CGATGAATGG 13500

CCAGTCAAGA CCGATATTGA ATTTACGTCC TTGAAGACGT TTAGTAGCAA CGTTTGTAAT 13560

ACCTTGTGAT AGTGGTTCTA CGGCTGCGAT GAACCATGAA CCGATAAGTG AGAAGAGTTC 13620

CAAAGATACA CCGGCAGTCA AACCAAGAGA CAACCATCCT TTGATAACAA GACGCCATTT 13680

ATCTGCATCT GCAACACCTG CAATTGGATG TGGAGTTCCC ATAATACCGA TAACGATACC 13740

AAGGATGAAA CCGATGAAGA ATTTAGATCC CCAGAAACCG ATTTTCTTGT TCAATTTAGC 13800

AGCATCAAAG TCATATTTAT CAAGGCCTGG GAAGAATTTT TCAAAAATCT TATCCAAAAC 13860

CATGATAACT GGGTTCATCA TGTAGTTCAT GTGAGTTGAT GTCATTGGTG ATGAACTTGG 13920

GGCGTTAAGA AGGTCATCAA ATGTAGGTTT CATCAAGTCA GAGTTGATAA TTTTCAACAC 13980

ACCGACAAGG ACGATAGCTG CTGTAGCAAT AAAGAGTGAA ACCCCTTGAC TCACACCATT 14040

GTTATCAGCA TACCATTTAA TCAAGAGACC TGTGATAGAC AAGTGCCAGA TATCAAAGAT 14100

ATCGACATCA AGTGTATCTG TTTTCTTCAT AGCTAGCATC ACTATGTTGA CAATCAACAT 14160

GATGAGCAAG AAGTATAGTG TCCAAGCAGA ACCCCAAGTG ATTGTAGCAA GTGGTGCCCA 14220

ACCAACGTCG GTAATACTCA ATTGGATACC AGTGTTTTCA ACGAATTTTG CTAGTGATGC 14280

TGAGAAAGCA GTGTTTAGCA TACCGATGAT AGCACCGATA CCTGTAAGAG CGATGGCAAG 14340

TTTGATACCA CCTTCAAGCG CTTTGGAGAA TTTCACTCCA AAAAGTAAAG CCAATACTGT 14400

CAAAATGATT AACATGATGA CAGGTCCACC CATTTCTAAG ATGGGATTGA AAACCTTTCC 14460

GATTAGGTCA AAGATTGCAT CCATAACAGT TCCTCCCTTT TTGATGTTAT ATGAATGTTA 14520

ACAAATTAGA ATTAGCTTAA TCCGTGTTCT TTAATAGCTG CTTCAATATT GTCAAATACT 14580

GGAGCGCTCA TTGCTGGGAT ACGGAATAAG ATTGGCCCAG CTTCGATAAC TGGGATACCT 14640

GGTTCAAAAC CAAGGTCTGT TGCAGCGATT GGTGTAAAGA TATCGTAACC TTTCATAAGG 14700

TCTTCGTTTA CATCTTTCAC CATGACTGCA TCACAGTGAA CATCATAACC ACGGTTTGAA 14760

AGTTCTTCTT CTAGAGCACT TTTAATTTGG TGACTTGAGT TAACACCTGC ACCGCAGGCA 14820

GCAAGAATTT TAATCATTTA GATTTCCTCC GATTTTATTT TTTAATAGAC AAGATTAAGC 14880

GGTTGCTTCA GCAATGTAAG TATAAAGGGC TTCTGGTTCA GAAATTTTTG ATAGGTCTTC 14940

AAGATGACCA TTTCCTGTGA AGAAGTCCAT TAACTGAGCA AGAATGTTCG TTTGACTTGA 15000

ACTTGAATTA TTAATGATAA AGAAGAGTAG GGATACTTCT ACTTCCTTAT CAGGAGCTAT 15060

CATATTGTGA AAAGTTATTG GTTTTTCTAA TCGAACAACC ACCACTTTCT CAGCTAGATT 15120

ATGAACAATA TCTGTGTGAG GAATCGCTAC ATTTGGCAAG TCCTTTCCTA GAAATTCCAT 15180

ATCTAAACCA GTTGGAAATG ACTTTTCACG CGTGATCAAG GCTTCACGAT AAGTTGGAGT 15240

GACAATTTCT CGTTCTTCCA ATAAAGTTGC AACCTGATCA AAGAGTTGTT CTTGACTATC 15300

CGCTTCTAAG CAAAACACAA GGTTTTTGTC AAAGAAATAA TCTAATACCA TAAGTTTTTC 15360

CGG 15363

(2) INFORMATION FOR SEQ ID NO: 140:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 28882 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 140:

TAAGACTATT TAATAGTGGA GTGAAATAGG ATACGAACAA ATTGATTAGG AAAATCAAAT 60

GAATTTATAG AAATCTTTTA GCAGTTATGT TATCCTATTC TAGTTTCAAA ACGCTATAGA 120

940

AGCAGCATTG TGCTAGTCkA GATTCAGTTT ACTATACTAA AACGAGTAGC TTGAAATCAA 180

AAAACCCACC CTCACAGGCA GGTTTTATCT GTATTATTCA GCTAGATTAT GCTTTACCTT 240

CTGAACCGAA TACGTCGATA CGTTCTTCAA CCGATGCTTG GATAGCTTTT ACACCGTCAG 300

CCAAGAATTT ACGTGGGTCG AAGAGTTTTT TCTTGTCGTA TTCTGCTTCG TTTGCTTCGT 360

AGTCACGAGC AAATTTACGA GTTGCGTTAG CGAATGCGAT TTGGCATTCT GTGTTAACGT 420

TAACTTTGGC AACACCAAGT TTGATAGCTG CTTGGATTTG CTCATCAGGA ATACCTGATC 480

CACCGTGCAA TACGATTGGG AATCCTGGAA GAGCTTCTGT CAATTTTTGC AAGTGGTCAA 540

GGTCAAGACC TTCCCAGTTT ACTGGGTAAG GACCGTGGAT GTTACCGATA CCAGCTGCCA 600

AGAAGTCGAT ACCAGTTTCA ACCATTGCTT TAGCGTCTTC GATTGGAGCC AATTCACCTT 660

TACCGATGAT TCCATCTTCT TCACCACCGA TAGTACCAAC TTCAGCTTCT ACTGAGATAC 720

CTTTAGCGTG TGCTTTTTCA ACAACTTCTT TAGCCAATTT AAGGTTTTCT TCAACTGGAA 780

GGTGTGAACC GTCAAACATG ATTGAAGTAT AACCAACTTC GATACACTCA AGTGCATCTT 840

CGTAGTGACC GTGGTCAAGG TGGATAGCTA CTGGTACAGT GATACCCATT GATTCAACAA 900

GGTTAGCGAT CAAGTTGCGA GCAACTTTGT AACCACCCAT GTATTTAGCA GCACCCATTG 960

AAGTTTGGAT CAAAACTGGA GCTTTTTTAG CTTCTGCTGC GCGCAAGATA GCTTGAGTCC 1020

ACTCAAGGTT GTTTGTGTTA AATCCACCAA CTGCATAACC GTTGTCACGG GCTGCTTGGA 1080

CAAATTTTTC TGCTGAAACG ATTGCCATTT TATCAGGCCT CCTGTATATT TTTATGGGTC 1140

ATCCCATTTA CATTGTTCAT TTTATCACTT TTTGCCAAAA AAATCTAGTT TTTCCCGCAG 1200

TTTCGATTGA TTTTCTTCTA ACTCCATCTA TGTAAACCCT TTCTCTCCCT AGTCTTGGAC 1260

GACTTTTGGA AAATCTATAA AGAAGGTTAA ACTATTCTCC TCCATCTCGA AACGATAAGC 1320

TAATTTTTCA TGTTCTAATA GACTCTTAAC CACAAAGAGC CCCATACCAG ACCCCTTGAC 1380

CTTGCGACTG GCATTGTCAG AAAAAGACTG GGCTAGTTTT TCTTGTTCCT CTGAGCTACA 1440

GCTATTTTCG ATAAAAAGTT CTCCTTCTCT TTCTCCAATT CGAACTAAGC CACCTGGAAC 1500

AGAGTGCTTA ATGGCATTGC TGATGAGATT AGAAAGAATC AACTTCATAA CTGATGGGTT 1560

TAGATAAGCC TGCTGATGGG TCAAACTATT GTCTATCTGG AGCTCTCTTT CCTTGGCTAG 1620

CAAGGCATAA TCTTTGACCA GATTTTGCGT CATCTGGAGG AGGTCAATTG TTTCCCTATC 1680

ATCTCGCAAT TCCTGCACAG AAGAGAGGGA AAGTATCTGC AGAACATGGT GATTGAGTTC 1740

ATCCACAATC CCCAAGGCAA CTCCCAGATA CTGGTCTCTA TCCTTATAAC GACCGATATT 1800

CTCTCTCATA TTTTCGATTA GGATTTTCAA ACTAGCCAGC GGTGTTTTCA ATTCATGAGA 1860

AGCTCCTCGT AGGAATTCGA CCTTCATCTT CTCCAGCTGG AGAATGGCTT CATTCTTTTC 1920

ATGCAAGTCC GCAATAACAG TCAAGAGATG CTGGTAGAGG CTATTGATTT GTTCCTTGAG 1980

ATTACCTATC TCATCCTTAG AATCCACGCG CAATCGCACT TGGGAATCCA GGTCCATCAT 2040

CCGACGGGTC ACCCGCTTGA TTTCCAAAAT CGGTGCAACA ATAGTCCGAG CGTAGATGTA 2100

GGCCACCAAA AGGGAAATCA GAAAGGAGGC CAGCAAGGTA TAGGGAAGAA ACTGGAGACT 2160

GATTTGCTCC GCTTCCTTTT GTAAATCCAT GGAAGCTAGA AACTGGAGAA TCATAGTACC 2220

ACCGTCTTGC GTTTTCACCT CGCGCTCCTC AATAAAGAGA GAGGTTGTCT GGCGGTCTGT 2280

GTCCAGAGGA AGACTGTCCT TGACTTCTAA CTTGTCCTCG GTCATCTCAC CTTTGACGGT 2340

CCCCTTGATA TCACTAGTCT GGGAATACAA GTCTAACACT TGCTCGATAC TCTGCCTATC 2400

TTTCCCTTCT AGGGACTGGG CAATGGCTGT TGCCTTTTGA CCAATGGTTT CCTGACGATG 2460

ACTCAGATAA GTCGAAGGAA AAAGAAAATA AATAGCTAAA TGAAGGCAGA TAACCAGAAC 2520

ACTAAATATC GAGAAGGTAT AGATAAATAT CTTTGCAAAT AAACCTGTTC GTTTCATTTT 2580

CGCTCCAATT TATAACCAAC ATTGCGCACA GTGAGGATAC AATCCAAGTC TAGCTTTTTC 2640

CGCAATTCCT TGATATAAAC ATCAATAACA CGGTCAAAGG GAACCTCATC TGTCGCTTTC 2700

CAGACGGCAT CGATAATCTG AGATCGAGTC AAGGCCCGGC CTTCATTTTT CACTAGATAG 2760

TCCAGAATTT CCAACTCTTT GGCATTGATA GGCACTTCTT GACCTGCGAG GCTTGCACTG 2820

TAGCTTTCAA AGTCCACCTT GGTATCCTTG TAAGAAAAGA TTCGTCCTGT ATCGTAGTAG 2880

CGCTTGAAAA TCGCGTCCAC CCTCACTTTT AAAAGGGAGA GGGAGAAAGG TTTTTCCAGA 2940

TAGCCATCTG CCAAAGAGGC AAAGGCACTC ATCTTGTATT CCTCATCTTG AAAAGCTGTC 3000

AACATCAAGA CAGGAACCTG ACTGGTTTTA CGAATCTCAG CTAGGACTTC TAAGCCGTTG 3060

AGCTTGGGCA TCTGGATATC CAGTAAAACC AGGGCCACCT CATAGCTAGA AAATTGCTCC 3120

AGAGCTTCCT GACCGTCCGC TGCCTCAATA GTTTCATAGC CACAATCCGT CAAATAATCA 3180

CTGACCCCCT CACGGATCAT CTCTTCATCT TCTACAATTA AAATTTTCAT ACTTTAACTG 3240

CTCTCTATTT TTTATTTTTC TTAGAATAAA TACCTACCCT ATTTTCTATT ATAGTCTCTT 3300

GCTGGCCTTT TGTCTGCAAG CAACTGACCA CTAGATAAAA CGTTGTGAAA TTCCTTTCTC 3360

ATAAATTCCA TAACTTTAGT ATATTATATT TAAGCACTAA AGTACAAAGA AAGCAACTGA 3420

AAGCAATGAT TTTCACCACT GCTTTCGGAT TTATTTTGAA TTGTTAAATA GCCATTCCTA 3480

TCCACTATTC TTGAATAGAA ACACAAGATG CAATCTTTAT TCTAGACTCA TTTTTTCAAA 3540

TTTATTCACC ATCCAGCAAG AGCTCTTTTG GTTGTTTTCT AAGGAGATTG CTTGAAGCAA 3600

GCGCCATAAC GAGAACCACT AGAACCAAGG CAAGGACAAA AATGATGATA AAGTCTGATG 3660

TCTGAATGGA AATGTCTAGG CTCGACAAGG TCTTGCTAAA GCCATCTACT TCTGCACCAC 3720

CACCAAGGTT AGAGGCTTGA GCCGCCTTAC TAGCCTGTTT GGCAACACCT GAAGTCACAT 3780

TGGCAAGGAC AGTGTTTCCA ATTGCACGGG CAGTGTAATT AGCTAGGAAG TAAGCAGAAA 3840

CTAGAGCAGG GATAGCAATC AAGATAGATT CGGTGATGAA TTGACCCAAG ATACTTGCCT 3900

GCTTGAGGCC GATAGAGAGG AGAATTCCCA CTTCCTTGCG ACGGGCGTTG ATCCAAAGGC 3960

TGAGCAAGAG GGCAAGGAGG AGAACTGAGA AGCTCAAGCT ACCCCAGAAG AGGAGGTTGG 4020

CCATCTTGTA CATACCAGAG ATAGATTGCT CAAGAGCTGG GTAGTTAGAG GAGCTCTTGA 4080

CGAGTGTGTA GCTCTTCCAG TTGATACCAC TGATGCCATT CAACTCTTTC ATAACATCAT 4140

CCAAGTTCTT GTCTGCTGTT ACAAAGAAGG TTGCGTCCCC ATAAATGGCT GTGTCTTCTG 4200

TGTATCCATA AAGTTTTGCA GCAGTGTGAA TGTCTGTAAT AGCTGTGTTT TCGTAAAGTT 4260

CTTGTGAGTA GGTTACTGCT GACTTATTAT GACCATCAAA GAGTCCCTTG ATTGTCACTT 4320

CAACTGTTTC CTTGGCTCCT TTTTCATTAT CTGCATCGTA GATATTAGAG TCCAGTTTAA 4380

CCTTGTCCCC TACTTTCCAG CCGTGTTTGG CTGCCAAGTC CTTGTGCAAG AGGATTTTAT 4440

CCTTGTCGTC GTTGGTTAAG TGCTCTCCTT CGACTAGTTT ATAAGAACCA GAGACAAACT 4500

TGTCTTCTTT AGAGGAGTCA TTGACACCTG TAATCATCAA GCTACTTCCA AAACGCTTGG 4560

CACGATCAGC AGTGAGATTC TTCTTGGTTT CTGGCGTTTC AATCAGGTCA TATCCAGTCA 4620

AATCTCCGAT AGCGTTGATA CGTTTGACAT AAGACTCAAT GGCCTTGTTT TCGGTGATTT 4680

TTTTGATGTC TTCACCCTTG ATATTCCCAG CACCACGAGG CGTTCCTTGG TTGACGCGAC 4740

GATTGATTTG CATGGAGAAG CTATTGGTGA TATTTTTAAA GGTCTCCTGA GAAGCCTTGG 4800

CAGTAGCTCC CTTGATTGAC AAGCCGACCA AACTCAAGCT CGCCATGAGG AGAATAATCA 4860

GGAAGATGAC AATCGATTTG AAAAACTTCC TTGTAACATA GGCAAATGCG TTGTGTAACA 4920

TAGATTCCCT TTCTAGATTT TGTTTTAATC ATTCTATTAA AATAAGCTCA AATTATTTAC 4980

TAGTATTGCG CGTTTCAGTC AGTTTCTTAT CCTTTAATTC AAGTGTAATA TCTGACGCTT 5040

GTGCCACTTC TTTACTGTGA GTTACGACAA TCACACATTT ACCTGTTTTC TGGGCAAGTG 5100

ATTTGAGTAG TTCGACAATA TCTCCAGCAG TTTTAGGATC CAGATTTCCT GTTGGCTCAT 5160

CAGCTAGAAT AACTGGAGCT TCTGAGACCA AACTGCGAGC AATGGCAACA CGTTGCTGTT 5220

GACCACCTGA TAACTGGAGA ACATTCCGCT TGATCTGGCT TTCATCCAAA CCAAGCTCAA 5280

GAAGTGTATT CTTGCTTGCC TTTTTGTTGA CCAATCGGAT ATTTTCCAGC GGAGAAAGAT 5340

AATCTATCAA GTTATAATTT TGAAAGACCA GGGAAATATG GTGCATGCGA TGGTAAGAAT 5400

AGCCCTTCTT ACGAATATCC TCTCCTTGAA AAAGGATAGA ACCTTCAACA GGACTATCTA 5460

GACCAGCAAG TAGGGACAAG AGTGTGGATT TTCCTGCTCC TGACTCCCCA ATAATACTGT 5520

AAAATTTTCC GGGTTCAAAA TTATAATTGA TCTGATATAG GACTGCTTCA GCAGTATTCT 5580

TATAACGGTA GGTAACATCT TGTAATTGTA ATAAAGTCAT GATTTCTCCT TCTTAACTAA 5640

TAGATGATAA AATTTCTTTC GGTGATTTTC TAAATAAGAA TAGGAAACAA AGGGCTACAG 5700

ATAAGCAACT AAGCAGAACT AGAAAAACAT AGGATTCTGC AAAAGATAAG ATGCTAGTTG 5760

ATAAACTGCT TGCTTTGGCT AGTGTATCTT GTAAGCTTGC CTGATCTCCA CTTGCTAGTA 5820

GAGTTTGGAG TAGGTAAGTT GTGATTGCGT TTCCTGCAAC AAATGCTGGA AGCAAAGCTC 5880

CAAGAGATAC CAAAACTACC TCTAAACAGA ATTGTAGGAA GATCGAGCTC TTGCCTTTTC 5940

CAAGTGCAAG TAAAATCCCC ACTTCATAGA CCCGTTCTCT CAACCAGAGA GACAAAACCA 6000

GAATTAAGGC TCCAGCTCCT GCTATCAACA TCCCATAAAG GAAGATGGTC AGGAAGGTTT 6060

GGAAAGTTGC AACTGAGTCT TTGATTTGTT CAAAAGCCTT GTTTTCCTTT TCGACTTGGT 6120

AGCCTTGATT TTCCAAGGCC AAGTTTTCTA CCTGCTTCAT GAGTCCGTCC ATTTCCTTAG 6180

GATTTTCTAC ATAGAAGCGT GCTGCACTGA CTTGAGCTTC ACTATTGCCC AAAAGGGTTT 6240

GGCTACTTTC ATAGTCTGTA AAGACTTGAT TTTCACTGAA GTCAGAAGAC AAGCCTGTGA 6300

ATTTCTCTTG TTTTTTACCA GAAAAGATGC CGATAATCTC AAACTCTACT GTTTGTCCTT 6360

TTCCAGATTC AGACTGACCA GCATCCAAGC CAATCTTGTC ATGAAGCGAA AGACCGTTCT 6420

TCTTAGCCAA TTCTTCGTGG ATAAGGATTT TCTTGGAATC CCCTTTTTGA AGGTGTCGCC 6480

CTTCTTTTAG ATTGAAAGCC GAACTGGTAA AGGTTACATC CTTGGATGAA TCCTCAAGAG 6540

CCGTTAAGCT AACCAAGTTA TTGTCTGCAG CTGATAAATC ATCACGCTCC ACGCTCTGCT 6600

CGCCAGTCAC TGCTTCCTTG TCTTTTAGTT TTGCGACCGT CTCAAGTTCA GGAGAGACAT 6660

TTTCCAGCCC CTTAATCTTG CTTACAGATG CTAGGTCTGA CAACTTGAAT GTCTGACCAT 6720

TCTCTATCTT CTTAATAGAA AAAGATGTAT TGAGTGATTT ATAAAGATTG CTTTCTACTG 6780

TTTTGTTGGA CTTCATCAGA GTCAAACAGG CTGAAATTCC GGCCAATAAG ACCAATAAAA 6840

TCAGAAATAA AATAAAACTT CTCAGTCGCT TTCTGCTGAC ATAAGCCCAA GATCTTTGGA 6900

TTGGATTCAT TTGTCACCTC CATATTTGTA AGACTATTAT AAAACCCAAA TATGAAATAT 6960

TTATGAAATA CGAAAAAAAA ATATCGAGTA GGGGATAATC TCTAGCCCCT CTCACACCAC 7020

CATACGTGCC GTTCGGCATA CGGCGGTTCA ACTAACTTTT AACGCATGTC GTTCAAGGTA 7080

ATAATCCAAA CACGAAACCA GTCCACGTTT TTCAAGGACT GGTTTTGATA TAGCACGTTT 7140

AAGTACCGAC TTCTGAGCTA CTATAGTAGA TTGAAACTAG AATAGTACAC CTCTACTTCT 7200

AAAATATTGT TAGAAATCGA TTTGACTGTC CTGAACAATT CGTCCTATTC TTATTTCATT 7260

TTACTATAAT TGATAGTGGT CGCCCCAGCC AGATACCTTA TCTGCTATCC ATTTAGGAAC 7320

CCCTAACTTA AGCAATCCCC ATAATCGTCT CGATTTCTTC TTCCATTGCT TCCAGATAAT 7380

CACTCGTAGG CGAGTACGCA AGCGCTCATC TATGCTAGTG ACTATACTTT TCATATTTAT 7440

AATTCATTCC TTTCGTTTCA CTCAAGGCAC AACACAGAAT GAAAAAGTGT TGTGATCTTT 7500

ATTTTGTTTT ATAATAATAG TGAGAAAACC TATCACTACT ACAAATCACG GGGAGGTGAA 7560

TAAGTGAGTG GTACAGCCAC TACCTCGCAT ATTTTGTCAC ATCATTTAAC GGTACATAAT 7620

AAGTTGTACC ATCTGAATAA GTTGCTACAA TATCATTTGC ATGCTCTCCT TCACCTTTAG 7680

CAAAGGTTGG AGCTCCTGCT GGATGATTTT TATTTGCCTC TTTCAATTTT TCAATAATGG 7740

CATTTTTTCT GTATCTTTTA TATTATCAGG ATTTTTCACT AAGATTTTGT CTGGATATGT 7800

CGGTTTAGCA GAAACAATTT TTACTGTTAC TTCTTTTTTA TTCGAAGCAC TTGTCCAGTT 7860

TCCAGCATTA TCTTTAGCAT TTAATTTTAC AGTAATTCCT GAACTAGGAA CTTCAGTAGC 7920

AGGTTGATTA TCAACATTAT TCAACTTTAA TTTCAAAAGA GCTGTTGCAT CAGACGTTTT 7980

ATCAATCGTT ATATATAATG ATGAATTGTT ATTATAAACA GTTCCTTCAT ATTTAGCTGT 8040

TTGTGAGCTA CTTGAAACAG AACTGAAATT ATACCCACTA CCTCCCTGAT TATCTTCAAT 8100

GCTTACGTCT AAATGAACTT CCCCACTATT ATTTGGCTTA GCAACAACTG TTATAGTAAA 8160

ATAACATAAA ATTTGCATAA ATAGATTAGG GAAATCAAAG CAGCTTCTAG GAATGTTTTA 8220

GCAGTCACAG TGTACTTTCC CAGCATCAAG CCACTATAAC TCTGCACATA AAAATGGAGA 8280

AGATGGCAAT CCTCTTCTCC AAATATTAAC TTCTTTACAA ACCAACTATA GTTGACAAAG 8340

AACCTAAAAT CAATTGATAA CACAAGGTCA GGTCGGTCAA CTCTTTCAAC TGAAGCCCTG 8400

TCAACTCTTC CCATTTATCA ATCTTGTATT GGAGAGAATT GCGGTGCAGA TAGAGTTGCT 8460

GGGCTGTTTT AGTGAGAACA GCACTATTTT CCCAAAGAGA GAGAATGATT TCCTGAATCT 8520

GATCTTGATC CAAAATCATC TGGTGTAGAC ATTCCTTGAT TGGCTTCAAG TCCACGAGTC 8580

TTTCTCCCAT ACTCCAAAGA TAGAGCTGAG AAAAAGTATG AACACCTTGG TGACCCTGAC 8640

GCCACCATGT CTTGAACAAA TCCCGCTCAG CTTTGATTAA GTCTGATAGG GCTTGATGTC 8700

CCGTCTGAGA CCAAACCTGA CCCAACATGA TAGAAAGACG AAGTCCAAAG TCATACTCAA 8760

CCGCTTCAAT CGTATCACTT AAAATATCTC TTACAGAAGT GTATTTGTCT TGTTGAAGCA 8820

CGAAAACATA ATCCTGAGCT CCGACCTGTA GCACTGTCTG ACAATTCGGA AAAAGAGTCC 8880

GCATCATATC TAGCCAAGAA GCCAGATTTT CCTGCTGAAA ATAAGAAAGA TGGCAATAAA 8940

CCAACTGAAT CTTTTTAAAA ACTTGCGGTG CCTGTCCCTT GCCCTCAACC AGATAGGAAT 9000

ACCAAGGGTT TAGCGAACGA GCCTGCTCCT GCTGGGTCAA AAGGGCAACC AACTGCTTTT 9060

CACGCTCGCT GAGCCCAGCT TCCTCCAGCA AAATCCACTG CTGAGAAGCT AAAGGGAGCG 9120

TGAGATAGCC CTCTTTCTCT ACTGGTTGGT CTGAAATCCG AGCCTCAGGA AACCAGTCTT 9180

GTAGTTCTTT TGCCCTCATG TTCTAGCCCT CCACTTTTTG GATGCACCAT GAAACCAAAC 9240

TCTCAAGACG TTCCAGATTC TCAGTCATAT GGAGATAGCC CATAACCGCT TCAAATCCCG 9300

TGGACATACG ATAAGTCACG ACATCTGCAT TTTTAGCCTT TGTGTGGCTA TTGGTATTGC 9360

GGCCACGTTT GTAGATTTCT TCTTCTTTTT CCGTTAGGAC CTGCTCCTCC AACATGAGAG 9420

CAATCAGGCG AGCCTGAGCC TTGGCTGACA CGTACTTAGT TGCTTCTTGA TGGAGTTTAT 9480

TGGGTTTGGT CATACCTTTG AGGATGAGGT GACGGCGAAT ATACATAGAA TACACCGCAT 9540

CCCCCTCAAA GGCTAGCGCA ATCCCGTTAA TGAGATTGAC ATCAATCACG TGTCCACCTC 9600

ACTCCATCCT TGGTATCAAG GAGCTTAATT CCTTGAGTAA CCAATTGGTC ACGGATTTGG 9660

TCTGCTGTCG CAAAGTCACG ATTGGCACGC GCCTCTTGGC GTTTTTGAAT CAAGTCTTCA 9720

ATCTCTGCAT CCAAAACTTC CTCAACAAAG ACAATTCCAA AAATTTCTAA CATATCTGCA 9780

AGAGCTTGCT TGACACTTGC ATCATAGTTC CCTGAGTTGA TCCATTTGGC CATTTCAAAG 9840

ACAACTGTGA TACCGTTGGC AGCATTAAAA TCTTCATCCA TAGCTGCTAC AAACTTATCT 9900

TTAAAGTTTT GTAACTCTTG GGCATCCACA TTTCCTGTAA ATGGTTGTTC GTAAGTATTC 9960

TTGAGATACT TGAGATTGGT CTCGGCATCG CGAACTGCCT TTTCCGTGAA GTTGATAGGC 10020

TTACGGTAGT GCTGGGTCGC AAAGAAGAAA CGAAGTACTT GCCCATCAAG AGTTTTAAGG 10080

GCATCGTGTA CCGTAATGAA GTTACCCAAG GACTTAGACA TTTTGACATT GTCGATATTG 10140

ACAAAGCCAT TGTGCATCCA GTAGTTAGCA AAAGCCTTGC CTGTTTTAGC TTCAGACTGG 10200

GCAATTTCAT TGGTGTGGTG TGGAAACTCT AGGTCAGCTC CACCACCGTG GATATCAATG 10260

GTATCACCTA AAATCTCTGT CGACATGACT GAACACTCAA TATGCCAACC CGGACGTCCA 10320

GGTCCCCAAG GACTATCCCA AGAAATCTCA CCTGGTTTGG AAGATTTCCA TAGAGCAAAG 10380

TCTACAGGAT TTTCCTTACG AGCCGTTTCT TCATCGGTAC GACCTGAAGC ACCTAGCTCC 10440

AAATCTTCCA AGGTTTTATT AGCCAATTTA GCATAGTTGT GGGATTTTTC TACACGGAAA 10500

TAGACATCCC CTTGACTCTC ATAGGCAAAG CCTTTCTCGA TCAAGTCTTC CACAAAACGG 10560

ATGATGTCTG CCATAAACTC CACTACACGC GGATGGCGAG TCGCAGGTTT CACGCCCAAT 10620

GCCGTCACAT CCTCACGAAA GGCAGCGATG TACTTATCCG CAACCTCCTG AGGCGTGATA 10680

CCTTCTTCCC TGGCACGGTT GATAATCTTA TCATCCACAT CTGTAAAATT GGAAATATAG 10740

GCAACCTTAT ACCCACGGTA CTCAAAATAG CGACGAATCG TATCAAAAGC TACCGTCGAA 10800

CGGGCGTTTC CTACGTGGAT ATAGTTGTAC ACCGTTGGCC CACAAACATA CATCTTGATC 10860

TTGCCGTCCT CAATCGGGAC AAATTCTCGC AAATCACGAG ACATGGTGTC ATAGATTTTA 10920

ATCATAAATC ATAATCAGGA AAGCTGAAAT CCAAGAACAA TTAGTTTCAT CACTAAAAGT 10980

TCAAGTAAAT TTCAGTCCGA ATATCTCTAC ACTTCGGAAT CCCTTGCTCC TTTCTCATTC 11040

AGATAAACCA CCTGAGTCTG TTTGACAAAG CCAATTTTTT CATACAAACG TTTGGCACCT 11100

ACATTGCTAT CTTCCACTGC AATCTGAAAT TCCTTGTCAT TTTGCTCAAT TAGTTGGTTG 11160

ACGAGGGATT TTGCTAAGTA GCTTCCATAG CCTTTTCCAC GTTCAGGTTC CAATATTGCT 11220

AAACCGTAGA GGTAATTCGT ATTAGTCGAT AAATCAACCG TACAAGTTCC AATAACCTGA 11280

CCAGCTTTTA ATAAAATATA TAGTCGGCTT TCTGGATCTT TCAGAGCTTC AGCGACATAT 11340

CTATCCACAA CTTCTCTCGA TTCATGTTCC TCTGAAAATG CCTGAAATTT TAATTGACTA 11400

ATTTGATCCT GATACGAACT ATCTGCTAAC AAAACTTCAA GATGGGAAAC ATTTGCTAAC 11460

GGATAAGGTC TTCTATCCTT ACCTAACCAA GTTTCTGTCT CTTCATCCTC GATTAGTCCC 11520

CAGTTACTGG CAAAGTCAGG ATGATTCTCT AAAAAAATAC GTTCTGTCTG AAAAGTGACT 11580

GACCGAATGG GGAAAGAAGC TGTTTCTCTC TCAAAACTAG TAAACAATGC ACGCGCAATC 11640

CCCTGACGGC GATGACCTGG ATGAACCAGT ATCGTCACTT CTACATCTTG GTCATCTGCA 11700

TAGACAGTTA ATAAACCAAC AAGTTCGCCT TTTTCATAAT AAAGGAAAAA GGCGGGCATG 11760

TTTGGGTCAA AATTAAGCAT GTTAGAGAGA TAGGGATCGC GATAGGTACC GTCATAGTTT 11820

TGGCAACAGT TAATTACTTT TTTCGCCTCA GATAGCTCCT CTTGGCTTAA CTTGTTTCTT 11880

GCTTGAATCA TATAGGTATC CTCTACAAAC CAGACGATCT GTGACTGGCA TCTTTAGCCT 11940

GCTCGAGTTT ATTGACATAA TACTCTCGTT TTTCTTCGAC TTCGTGAATG ACAGGCTCAT 12000

CTTTCTTACC ATGAAGACGG ACAATCTTGG CCGGAATACC GACAACCGTC ACGTCACTAG 12060

GTACATCTGC TACGACAACT GCTGCAGCAC CGACCTTGGC ATTTTCACCA ATTTCCACAG 12120

GCCCGATAAC TTGGGCATGG GCTGATATGA GGGCTCCCTT TCGTACAGTC GGATGGCGTT 12180

TGCCACAGTC TTTCCCTGTT CCCCCGAGAG TCACTCCGTG ATAGAGAAGA ACGCCTTTTT 12240

CAACAATCGC TGTCTCTCCA ATCACCAGAC CAGAACCATG GTCAATAAAA ACACCTGAAT 12300

CAATCTGGGC TCCTGGATGA ATCTCAATCT GAGTCCAAAA GCGCCAAAAC TGACTGTACA 12360

TACGAGCTAA TAGTTTGAAG CCGTGCTTCC AGAGAAAATG CGAGAGACGG TGGGCCGCCA 12420

AGGCCTTGAC ACCTGGATAA GTCAGCAAAA CCTCCAAAGT GGTGCGGGCC GCTGGATCAT 12480

TTTCTTTTAC AATATCAATG GTTTCGCGCC ACCACCCCAT ACATTTCTCC TTTTCTTATT 12540

CTGAATCTTT TGATGTTTCT GTAAATTCTT TCTTAGGTTT GTAATCCTTT TGATGACGTG 12600

GGCGGTGAGG GCGCTCAGAC TTTTCACCTT TTTCATCATG CTCAGGTTTT GGCGGACGAG 12660

GTAGAAGAGC CTTCATAGAG GCATCGATAC GGCCTTTTTC ATCAATTTTG ATAACCTTAA 12720

CATCAACTTC ATCCCCGATT TCTACCAAAT CCTCTACACG ATTGGTACGA GTCCAAGCCA 12780

TCTCAGAGAT ATGAACAAGG GCATCTGTCT TATCAAAGAG GTTAACAAAG GCACCAAATT 12840

TCTCGATACG AACGACTTTA GCACGGTAAA CTTCATCCAC TTTGGCTTCA CGAACCAAAC 12900

CAGCAATAAT TTCTTTGGCA CGGTTAATAG CATCTTGGTC ACTAGAGTAG ATAGACACAT 12960

TTCCTTCTTC GTCTATATCA ATCTTAACAC CTGTTTCAGC GATAATCTTG TCGATGGTTT 13020

CTCCACCCTT ACCGATGACA ATCTTAATCT TGTCCACATC AATCTTGATC GTATCAATTT 13080

TCGGAGCAGT TGGAGCCAAT TCTGGACGAA CTTCTGGAAT GGTTGCTTCA ATGACATCAA 13140

GGATTTCAAA ACGCGCTTTC TTGGCTTGAG CAAGAGCCTC CGTCAAGATT TCTGCAGTAA 13200

TCCCTTGAAT CTTGATATCC ATTTGAAGGG CTGTAATCCC ATCACGAGTA CCTGCAACCT 13260

TGAAGTCCAT ATCTCCAAAG TGATCTTCCA AACCTTGGAT ATCTGTCAAT ACTGTGTAGT 13320

TATTTCCATC TGAGATAAGC CCCATAGCAA TACCAGCTAC TGGCGCCTTG ATTGGCACAC 13380

CACCAGCCAT AAGGGCAAGA GTTCCCGCAC AGATAGAAGC TTGAGATGAA GAACCGTTTG 13440

ATTCCAAAAC TTCTGCTACT AGACGGATAG CGTAGGGGAA TTCTTCCAAG CTTGGCAAGA 13500

CTTGAGCAAG AGCACGCTCA CCAAGGGCAC CGTGACCGAT TTCACGACGA CCTGGCGCAC 13560

CGTAACGACC TGTTTCCCCT ACAGAATATT GAGGGAAGTT ATAGTGGTGC ATAAAGCGTT 13620

TCTTGTACTC TGGATCCAAA CCATCAATGA TTTGAGTTTC TCCCATCGGA GCCAAGGTCA 13680

AGACTGAAAG AGCTTGAGTT TGCCCACGAG TAAAGAGACC TGAACCATGT ACACGAGGAA 13740

GGAAGTCAAC AACCGCATCC AAAGGACGGA TTTCATCGAC CTTACGACCA TCAGGACGCA 13800

CCTTGTCTTC TGTAATTAAA CGTCGCACTT CTGCGTGTTC CATTTGTTCC AAGATTTCAG 13860

CCACATCACG CATAATACGG TCAAATTCTT CGTGGTCCGC ATATTTTTCT TCGTAAACGG 13920

CAGTCACTTG GTCTTTCACT ACTTGAGTCG CAGCTTCACG GGCCAATTTC TCTTCTACTT 13980

GAACTGCCTT TTGGAGGTCA CTGTTGTAGG CTGCAATGAT TTCAGCTTGC AATTCAGCAT 14040

CCACGTGAAG CAATTCCACT TCTGCTTTTT CTTTACCGAC AGCAGCAACG ATTTCTTCTT 14100

GGAAGGCAAT CAATTCTTTG ACAGCTTCGT GCCCTTTAAG GAGCGCTTCC AACATGATTT 14160

CTTCTGACAA TTCTTTGGCA CCAGACTCTA CCATGTTGAT AGCGTGCTTG GTTCCAGCTA 14220

CTGTCAATTC AAGAAGAGAT TGCTCTGCTT GTTCTTGACT TGGGTTGATG ATGATTTGGC 14280

CATCTACATA TCCCACTTGT ACCCCAGCAA TTGGTCCGTC AAATGGAATA TCTGAAATAG 14340

ACAGTGCCAA AGATGAACCA AACATAGCAG CCATTGGTGC AGATGCATTT TCATCATAAG 14400

AAAGCACTGT ATTGATGACT TGGACTTCAT TACGGAAACC TTCCGCAAAC ATAGGACGAA 14460

TCGGACGGTC AATCAAACGC GCTGTCAAGG TCGCATCTGT TGAAGGACGT CCTTCACGTT 14520

TCATAAAGCC ACCAGGAAAC TTCCCAGCCG CATACATTTT TTCTTCGTAG TTGACTTGGA 14580

GTGGGAAGAA ATCCCCAGTT GCCATTTTCT TAGACATAAC GGCAGCAGTC AAGACAGTTG 14640

ACTCACCGTA ACGTACGACA ACAGATCCAT TTGCTTGCTT AGCAACCTGA CCAGTCTCTA 14700

CAATTAACTC ACGACCCGCA AAAGTCGTTT GAAACACTTG TTTTGCCATT TTAATCCCCT 14760

TTGGATTGAT GAAATTATAC GCCTTGCCTA CAAAGATCAA GATACCAAGG ACGTCAAAAG 14820

CAAAGTAAAA ATAGGAAACT GACGAAGTCT TCGATGAAGA CAAGACAGTT TATCTTTTTT 14880

ACACAGCTTT TCGGCCGTGT TCAATTACAC AAGATATTTT GGACGGTTCG GCTTGCCGAA 14940

CATTTCTGTA GAAAAATAGG AAGGTGACGT CGCACTCGAC GAGTGCTAGG AAGCTTATCT 15000

TTTTTCCTAA GAAATGAGAC CAAAATTCAA GTCATCAAGA TACCAAGCCG TCAAGCAACT 15060

CAAAGGAAGA TAGGAAATCG AACGACGGAG CGACTACTCC TAGGGAGATT TATCTTTTTC 15120

CACAGAGTTG TAGGCAAGTT CAGTTTTCAA GATACATCAT TAGAAAGGTT TAATACTAAA 15180

GTATCTAAAG CTTTCACGCT AATCGCTATC GGGCGATTAG CTAAATGCTT TACTAACTCT 15240

CTCGTCAAAT AACATCGATT TGACTCACTC GTGTCGTTAA ATCTTACAGT TTAAATGCAT 15300

TGTATTATTT AATACCTTCA TCTTTGTATC AAGTACGTAC AGAATTTATT TTATCATATT 15360

TTTCTTAAAA AGTGAGGTCT TTACCATTAA AAAGGAACCA TTCCCCTCAC CTGAGAAGAA 15420

TGGTTTGCTT TTATTATCCT AGAGACTGGT GATTAAACAA GGCATGGGTT GCTTGATGGA 15480

TGTATTTTGC TGTATCAGCA TTATTCATCG TATAGAGATG CACACCGGCA ACATCCTGAG 15540

TTACCAAGTC CACGATTTGG TCCACTGCAT AGGCAAGTCC TGCTGCTCTG AGCGACTCAG 15600

GGTCATGCTC ATACTTGTCT AAGATGGCTT TAAATTTGCG TGGAAGATGG ATATTCTCAC 15660

AAGTCTTCAA GAGTCGGAGA GCCTGATTTC GATTCAGAAT TGGCATAATT CCTGCATGAA 15720

TGGGAACATC AATCCCAGCC AAGATACACT TGTCCTGAAA ATCATAGAAG CGCTCATTGT 15780

CAAAGAAGAG CTGAGTTACG AGGCTCGAAC AGCCTGCATC CACTTTCTTC TTAAGATTTT 15840

GAATATCTGA AATCTGATTT GGCGAATCTG GATGCCCTTC TGGATAGCAA GCTCCAATAA 15900

TATCAAAGTG AGGGGTTTGT TCCTTGATAA ACTCAATCAA GTCGGTTGCA TAGCGGAAAT 15960

CCTTTTGTGG TTCCACGTCT GGAATAATAT CCCCACGAAG AGCCAAGATT TTCTGCACCC 16020

CAACTTTGTC CAAGTCAGCA ATAGTTTCAG CAACCTTGTC CTTAGTTAGA TAAATAGCTG 16080

GCAAGTGGGC AATGGTCGGA ATCGCCAAAT CATTTTGGAT AAAGTCAGCC AAACGAACCG 16140

TCGTTTCCTT GATATTAAAT TTATTATTGC TGGCAGTTAC ACTGATAAAA TGGGGAGCCA 16200

ACTCCTGCAT ATCCTGCAAG GCTGAAATAA TGTTATCATT ACCCACGGCT GGGTTTGGAG 16260

GGAACACTTC AAATGAGAGT GACGGTGTTT GGCGTGACAT ATGTAATAAC CTTTTCTAGT 16320

TGATTTCTTT TTGAACAACC ACTGTATGGA GAGAAATCCA ATCTTACAAT TTCTCACGCG 16380

CAGCTTTAGC TGCTTCAACA AGGCGGATCA AGCTTTCTTT TGTTTCTGGG ATACCACGTG 16440

TTTTCAAACC ACAGTCAGGG TTGATCCAAA CTTTCTTGCT TGGCACTTTA GCAAGGATGG 16500

CTTCGATTGT GTTGTCGATT TCGCCTTCAT TTGGTACACG AGGTGAGTGG ATATCGTAAA 16560

CCCCAGGTCC CACTTCTGTT TGGAAGTTTT TCGCTTTGAG TTCGTCCAAG ATTTCAAGGT 16620

TTGAACGGTT AGCTTCAAAG GAAATAACGT CTGCATCCAT GTTATCGATA GCTGGGATGA 16680

TATCTGTAAA TTCTGAGTAA CACATGTGAG TGTGGATTTG TGTGTCTGGC GCTACTGTTG 16740

AGTGTACCAA GCGGAAGGCA GGAATAGCCC AGTCAAGGTA GTCTTCGTAC CAGTCGCTAC 16800

GGCGGAGTGG CAATTTTTCA CGAAGAGCAG CCTCGTCGAT TTGGATGATT TTCACACCAG 16860

CAGCTTCAAG GTCAAGTACT TCATCCTTGA TAGCAAGGGC GATTTGGAGA GTTGAATCCT 16920

TGATAGAGAT GTCTTCACGT GGGAATGACC AGTTAAGGAT GGTAACAGGT CCAGTCAACA 16980

TACCTTTAAC AGGTTTGTTT GTACGACTTT GTGCATAGCT AGACCATTTA ACAGTGATAG 17040

GGTTAAGACG AGTGACATCA CCCCAGATGA TTGGTGGTTT TACCCCACGC ATACCGTATG 17100

ATTGTACCCA TCCATTTTTA GAGAAGAGGT ATCCTGACAA GTTTTGACCG AAGTACTCAA 17160

CCATGTCATT ACGCTCAAAT TCACCGTGAA CAAGGACATC AAAGTCAATA TCTTCTTGCC 17220

ACTTGATCCA TTCGTCAATC GTTTCAGCAA GGAAAGCGTC GTACTCTTTT TGAGACAATT 17280

CACCTTTACG GTAAGCCAAA CGTTTGGCAC GAACTTCTTT TGTTTGAGGG AATGAACCAA 17340

TCGTTGTTGT TGGAAGAGCT GGAAGTTTGA AAGCTTCTTC TTGGATAGCT TCACGTTCTG 17400

CAAAGGCTGG CAAACGAGTG TAGTCTGCGT CTGTCAAGCC AGCGATACGC GCACGAAGTT 17460

CAGCATTTTC ACCAACACGC TCAGTCGCAA AGAGTTCTTT GTTGGCTGCA AGAGCTTCTG 17520

AACCTTGACC ATTTCGGATA GCATCCAAGT CACGGATTTC ATCCAATTTT TCAACTGCAA 17580

AGGCAAAGTG GTTCAAGAGT GCTGGTTCAA ATTCTTCATT AGCAGTTGTA AATGGCACAT 17640

GAAGAAGTGA GCAAGAGCTT GTCAAAACGA TGTTTTCAGC TGGAATTTGC TCAAGAACAG 17700

CCAAGCTCTT TTCGTAGTTG TTGCGCCAGA TGTTTTTACC ATTGACAATA CCTACATAGA 17760

GAGTCTTGTC AGCTGGGAAG CCACCTTTAA CGAGTTCAAG AGTTTTCTTA CCTTCAACAA 17820

AGTCAAGACC GATAGCATCT ACTGGTAAGT TTACAAGGTC AGCGTATACG TCACGAACAT 17880

CACCGAAATA AGTTTGAAGC AAGACTTCAA GACCTTTTTT GTCAGCCAAG AGTTTGTTGT 17940

AAAGGTTCAA GAAGAGAGCT TTTTCTTCAG CTGTCAAGTC TTTTACAAGA GCCGCTTCAT 18000

CCAATTGGAT GCGAGTCGCA CCAAGTTCAG CCAATTTAGC AAAAACTTCT TGGTAAGCAG 18060

CCACTAAGCT ATCTACGAAG TCGTCTGCTT TCACGCCTTC TTCAAAGTCT GACAATTGAA 18120

GGAAAGTGAA GGGACCTACA AGAACAGGAC GAGTGTTCAA TCCAAGTTCT TTGGCTTCTT 18180

GGAACTCATC GAAAATCTTG TGACCAGCCA ATTTTACTTG AGTGTCTTTT TCAAATTTAG 18240

GAACGATGTA GTGGTAGTTA GTGTTGAACC ATTTCTTCAT TGGAAGGGCG CGAACGTCCC 18300

CTTTTTCTCC CTGGTAACCA CGTCCCAAAG CGAAGTAGCG CTCAAGGTCA GACAAGTCCA 18360

AGTTTTGAAC GGATGCAGGC ACCACGTTGA AAAGGAAAGC CGCATCTAGG AAGTTATCAT 18420

AGTGAGAAAA GTCATTTGAT GGAATTTCAG TGATGCCTTT TTCTTTGACA ATGTTCCAGT 18480

GTTTAGCACG CAAGTCTTTT GCTGCTGCTA AAAGTTCTTC TTCTGAGATT TCTTTTCTAA 18540

AGTATTTTTC AGTTGTAAAT TTTAATTCAC GGAATTCGCC CAAACGAGGG AAACCGATGA 18600

TTGTAGTTGA CATGATGTGT CCTCCAAAAT TTGTTGTTGA AACTATCTTA ACAGAAAAGA 18660

AAGCGTCTGT ATAATTGTAA AAAATTAGGG TTTGATATAG TTTGAAACTA TATATCTGTT 18720

TCGGACAAAA GAAAAAGACT TGAAGCAAAC GTCTCAAATC CTTTGTAATT CTTACTTTAC 18780

AGCTATATTC CAATTAGAAT ACTAAAACAT GTTATTAGTA ATTCTTATAA GTGACTATGA 18840

CCTGTTATTA GAAAAGACTA TAACTGATTC TAGTCAACTT TTTCCCTGTT CAAGTGGGAC 18900

GATTGCTAGT GTCTTTCCTA AACTGGCTAG GACTTTTAAG ACTGTATCCA ACTGAGGACT 18960

AGTCTTTCCT GTCTCCATCC TAGCTATGAC AGGCTGGCTT ATTCCACTGA CTTCTTCCAG 19020

CTTTTTCTGA CTGATTCCTT GTTCATACCT AGCCTCAATC AACTCGCTCA TGATAGCCAC 19080

TCGCATATCA CTTTCAAGGA TTTCCTCCTT GCTAAAGAGC TCAGATGGAC ATCCTTCCAA 19140

TTACTCCCAA TAGCACTATT CTTCATCACT TAACCCTCTT TTTTTTACGT CTATGTATTT 19200

TTAAAAAAAT GAGCGAATTA TGATTCGATA GATTGACCAG TGGGTTTAAA GTTGGTGCTA 19260

GCCTATTTCT TAAGCGATTT TCCTTTTCTA GGATAAAGCA GTTCCTGCTT GCTTAACCCC 19320

AATTTTCCAC GATGAATCCA ATAGTAAATG GTTGAAATTC CCACGTTAAC CCCTTTAGCC 19380

ATCACCATCA TTTCAGGCGA AAATTTTTGG TTATGTTTTT GGTTATGTAT AGTGGAGAAT 19440

CTTTTCCTTT AGTTTCTTAA GACTGTTGAG CGTAGTCGGC AGAATAAATC TCTTTGAAGC 19500

GCCCTTTTCC AAGACATTGT CGGACTGTCC CACGCTTGAT TTCAGTGTGG ATAGTTTGAG 19560

GAGCTTTTCC AAGTAGAGAG GCAATTTCTC TATTTGATTT TCCTTCTTTT TTCCATCGTT 19620

CGATTAAGCG ACGGCTATCG ATTGTCAAAT GTTTGCCTTT TGTAGTATAA TTGTCTTGCA 19680

TTTCTGTGCC TTTTAATCAT TTCAATCTTA AATTGGACTT TTTTTACTTG GGTTGTACTT 19740

AATCTATGAG GAAGACAAGA AAAAGAATAT CAATCAAGTA AAGTCACAAA GTCACATTAG 19800

CTCCGAGCAA CCATTGCAAA TTGAGGTACT CACACAATGA TTAAAACATT TCTCTCTGCC 19860

CTTTCGGTCA TTCTCTTTTC TATCCCTATC ATAACTTATT CTTTTTTCCC ATCTTCTAAT 19920

CTTAACATTT GGCTATCTAC CCAACCTATC TTGGCACAGA TTTATGCCTT CCCCTTAGCT 19980

ACTGCAACTA TGGCTGCTAT TTTAAGTTTC TTATTTTTTT TCCTATCTTT TTACAAGAAA 20040

AATAAACAAA TACGGTTTTA CTCTGGCATT TTGCTCTTAC TATCGCTCAT ATTACTATTA 20100

TTCGGAACAG ATAAAACCCT TTCTTCTGCA TCAAATAAGA CTAAAACCTT AAAATTAGTA 20160

ACTTGGAACG TCGCTAATCA AATAGAAGCA CAACATATTG AGCGAATTTT TAGCCATTTT 20220

GACGCCGATA TGGCTATATT CCCTGAACTA GCTACCAATA TCAGAGGTGA GCAAGAAAAC 20280

CAGAGAATCA AACTATTGTT TCATCAAGTT GGACTTTCTA TGGCCAACTA TGATATTTTC 20340

ACTTCTCCAC CTACCAATAG TGGAATAGCT CCTGTGACTG TGATTGTCAA GAAAAGTTAT 20400

GGTTTCTATA CAGAAGCTAA AACTTTTCAT ACAACACGGT TCGGGACAAT TGTATTACAT 20460

TCGAGAAAAC AAAATATACC AGATATCATT GCCTTGCATA CTGCGCCTCC TCTGCCAGGT 20520

TTAATGGAAA TCTGGAAGCA AGACTTAAAC ATCATTCATA ATCAATTGGC TTCAAAATAT 20580

CCAAAGGCTA TTATTGCAGG TGATTTTAAT GCAACTATGC GTCATGGAGC ACTTGCAAAA 20640

ATAAGCTCTC ATAGGGACGC ATTAAATGCA CTGCCACCTT TTGAAAGAGG AACTTGGAAT 20700

AGCCAAAGTC CAAAACTTTT TAATGCAACA ATAGATCATA TTTTATTGCC TAAAAACCAC 20760

TACTATGTTA AAGATTTAGA CATTGTAAGT TTTCAAAACT CTGATCATAG ATGTATTTTT 20820

ACAGAAATCA CATTTTAATT ATTTTATATA AAATCACCCC TCTAATGTTC ATAAACTAGA 20880

GGGGGAATTT GTATCCTACT ATCGTTTAAC GCACTTCTGC ATTGACTTTT TCTTCGAGAG 20940

ACGCTTGGAT TTTTTCCATA TAGCGTGCGA CTTCTTCGTC CGTTAAGCTG TCTTCTGGAT 21000

TTTGGAAGGT CAAGCTATAA GCCATTGACT TCATACCAAG TCCCAGTTTT TCACCTGAGA 21060

AGACGTCAAA GAGTTTGATA TCTGTCAAAC GTTTCACGCC GGCAGCTTGG ATAGCATCTA 21120

CAACTTCTTG GTGAGTCACT TCTGCCTTGA GGAGAAGGGC AACGTCACGG CTGACTGCTG 21180

GGAATTTGGT GATTTCCACA AATGGAACAG CAGGTTGGAG CGCCCCTTCG ATGGCTGAAA 21240

GGTTAAGCTC AGCTACATAC GTTTCTGGAA TATCGTAAGC CTTGGCAGTG ACTGGATGCA 21300

CTTGGCCAAG GAAACCAAGA ACTTGGTCAC CGAGTGAAAT CACGGCTGTA CGACCTGGAT 21360

GAAGGCTAAC GATTTCAGAT GTTGCTGTAT AGGTTACTTG GAGTCCCAAA CGAGTAAATA 21420

GGGCTTCAAG GATTCCCTTA GCATAGAAGA AATCAACTGG AACTGCTGCT GTTTGGAAAT 21480

CTTTTTCAGC AACCAAGCCT GTCAAGGCAA AGGCAAAGCT GTTGATCTCA TTTGGAAGTT 21540

CTTCTTTTGG ATTACCTGTT TGTTCAAAGA CTTTTCCAAT CTCATAAAGG GCCAAGTTTT 21600

TATTCTTACG AGCCACGTTG TAGGCAACGG TATCAAGGAT CCCTGAAATC ATATTTTGAC 21660

GGAGGACTGA ACGATCCACA GTCATTGGCC ACATGAGTTC AGTAAGGTTA CTTGGTTGAG 21720

CTGTGAACTC AACTGCTTTT TCAGGAGTTG TCAGAGCATA GGTGATGATT TCTGTCAAAC 21780

CTGCTCCTTC AGCAATGGTA CGAACTTGAC GGCGGAGTTT TTGTATCACA GTCAATTCAC 21840

CAGCTGTACC ATCGTCTTTT GGAAGGCTGG TTGGCAAGCG GTCATATCCA TAGATACGAG 21900

CGATTTCTTC AAAGAGATCA GCTTCGATTG TGATATCCCA ACGACGACGT GGTACGCTGA 21960

CTGTAAAGCT GTCTGCATTT CCAGAAAGAC CAAAGCCAAG ACGACGGAAG ACGTCTTCTA 22020

CATCAGCATA AGACAGCTCA GTTCCGAGGA CACGGTTAAC ATCAGCAAGG GTTGAAGAAA 22080

CTTCCACATC AGAGGTATCA AGCTCACCCG CTGAAACGAT ACCCTTACGC ACCGTCGCGC 22140

CTGCAAGCTC TGCAATCATG CTAGCTGCCG CATCAAGGGC TTCATTAACT GTTGCCACAT 22200

TAATTCCTTT TTCAAAGCGA GAAGATGACT CAGAACGAAG GTTCAGGCGA CCACTTGTCT 22260

TACGGATAGA TTTGCCATTA AAAACAGCAG CTTCAAGGAT AACACGACTA GATTTTTCAG 22320

AAATTTCTGT AGCCTGACCA CCCATAACAC CGGCAAGGGC TACTGGTTTG TCAGCAACTG 22380

TAATCACGAG GTCTGTCTCA GCCAAGTCTC GTTCTTCACC GTCCAGGGTC ACTAATTTTT 22440

CACCATCACG CGCTTCACGC ACACGGATGT CAGTCCCTTC AAATGTGTCC AAGTCAAAAG 22500

CATGCATAGG TTGACCAAAG TAGAGCAGGA TGTAGTTTGT CACGTCTACA ACGTTATTGA 22560

TGGGACGGAT GCCTTCGTTC ATGAGAAGGT TTTGCAACCA TTGTGGACTT GGTGCGATAG 22620

TCACATTGTC CAAGATACGA GCTGCATAGT AAGGCGCCTT GTCTGTCTCA ATGCTGACAG 22680

AAAGGGCATC TGCCGCAGCT TCATTAGTTT CTGTTAGAGT AAATTTTTTA AAGTTGACTG 22740

CCTTGTCATA GATGGCTGCC ACTTCGTGAG CCACTCCACA CATAGAAAGG GCATCTGCAC 22800

GGTTTGGTGT GATGGAAAGT TCGATGATTT CATCATCCAA GTCTAGGTAA GAAAAGACTT 22860

CCTCACCTGG CACGGCATCT TCAGGCAAGA TTTGGATGCC ATCTGCGAAT TCCTTAGGCA 22920

CAACTGAGTC AGAAATTCCC AATTCACCAA GTGAACAGAT CATTCCAAGT GACTCCAAAC 22980

CACGGATTTT TCCTTTTTTG ATTTTGTAGT TATCAGCGAT ACGAGCTCCT GGAAGAGCCA 23040

CCATGACCTT GATCCCAGCA CGCACATTTG GGGCACCACA AACGATCTGA CGCTCTTCTT 23100

CTTCGCCAAC GTTAATCTGA CAAACATGGA GGTGAGTCTC TGGCACATCT TCGCAAGACA 23160

AGACCTCACC GACGACAATT TTTGAGAGAC CAGCAGCTGG TGATTCGACA CCCTCTACCT 23220

CGATCCCTGT AGTTGACATT TTTTCAGCCA ACTCTTGTGA TGGCACATCA ATGTCCACCA 23280

ATTCTTTTAA CCATTTATAA GATACAAGCA TAATTTAGTT CTCCAGAATG ACAGTTGTCA 23340

CTCTAGTTCT TTTCCTTTCC TATCATTTCA ATAGAAGAAT CCTCTTCTTA CCTTAATTTC 23400

TTTCTCAGTA ACCAATCCGT ATCTACTTTT TGACCAACCA TAAAATGATG TTGGCTAAAT 23460

TTTTCAAAAC CATATCGGTT ATAAAACGCT TGAGCTTTTG TATTATGCTC CCAAACACCT 23520

AGCCAAGCCC AAGAAAAACT ATTTTTTGTA GCAAGTTCAA GTGCGAATTC AAACAGTTGC 23580

TTACCTAGTC CAAATCCTTG GAATTTTTGT AGCACATAGA GACGTTGAAT TTCAAAAGCG 23640

TCCTCTAATT CTCTCTCAGT TTGAGCACTT CCCCAGTTGA CTTTGAGAAA ACCAGCTATC 23700

TCCTCCTCAT GCATAATGAA ATAGGTTTCA GAGTCAGGAT TTCCCAACTC AGTTGACAAA 23760

GTTTTCAGAC TATAAGCCTC TTCAAAGTAT TCCTGTAACT GCTCTTCCGT ATTATCATAC 23820

GCAAAGGTTT CACGAAAGGT TTGTTTGGCA ATTTTAGCCA ACACCTCAAC ATCTGCCATT 23880

TCTACTTTTC TAATCATTAT TTAAACTGTT CTGAGAAGCG GACATCTCCT TGGTAGAATC 23940

CACGGATATC GTTGATTCCA TAACGGAGCA TAGCTACACG CTCTTGTCCA AGACCAAAGG 24000

CAAAGCCAGA GTATACAGTC GCATCGATAC CACTCATTTC AAGGACACGT GGGTGAACCA 24060

TACCGGCCCC CATAATTTCG ATCCAACCTG TTTTCTTACA TACATTACAG CCTTCTCCAC 24120

CACACTTGAA GCAAGAAACA TCCACCTCAA CAGATGGCTC TGTGAATGGG AAGTAAGATG 24180

GACGCAAACG AATTTGACGC TCTTCACCAA ACATTTTTTG GACAATCAAC TGAAGCGTTC 24240

CTTGAAGATC AGCCATAGAG ATATTTTTCC CAACTACCAA GCCTTCGATT TGGTGGAATT 24300

GGTGACTGTG GGTCGCATCG TCCGTATCGC GACGGAAGAC ACGCCCTGGC GAGATCATCT 24360

TCAAAGGACC TTTAGAAAAA TCATGGGCAT CCATAGCACG CGCCTGAACT GGAGACGTGT 24420

GGGTACGGAG CAAGATTTCT TCAGTGATAT AGAAAGTATC CTGCATATCA CGAGCTGGGT 24480

GGTCTTTTGG AAGGTTCATA CGTTCAAAGT TATAGTAGTC TTGCTCCACT TCAAAACCAT 24540

CCACGACTTG ATAACCCATA CCGATGAAGA TATCTTCGAT TTCTTCACTG GTTTGTGTCA 24600

AAACGTGACG GTGACCAGTC GCAACTGGAC GACCTGGAAG CGTCACATCT ATACTCTCGC 24660

TAGCCAGTTG AGCCGCGACT TTCTTTTCTT CCAAGAGCTT AGCTGTTTCT TCAAAAGCAG 24720

CAGTCAAGAC ATCACGAGCT TCATTGACGT GTTTCCCGAT GATTGGACGC ATCTCAGCAG 24780

AAACATCTTT CATCCCTTTG AGGATTTCAG TGAGCGAACC CTTTTTACCA AGGACAGAGA 24840

CACGCAAATC TTGCATCTCT TTTTCATTTC CAGCAGTAAT CTGCTTCAAG CTAGCCAGCG 24900

TTTCTTCGCG AAGCGCTTTT AATTGTTCTT CAATAGTTGA CATATTTCCT CCATCAGTCT 24960

CTCGTAGATA AAAAGAAAAC CACATGCCAA AAACTCCACT CGGAGCGTTG ACACGCGGTA 25020

CCATCCGTTT TCATCTGACA AGTCAGACCT TCATTTCTAA ATCCATGCGC AAGTGAATTC 25080

ACCCAGCTTT CATATAGAGA GCTTGCAGTC ACGGCTCTCC TCCCTGATAT ACTTCCCTTG 25140

GGCTACTAGT CTTTCAGATT CCTATTCAAT TACTACTTAG TTTATCAGAT TTTTACCATT 25200

CTTGCAAGAC CTATCTTACT TCTGCTTGTT AGCTTATTCT TATCTAAATT TATATAAACc 25260

TTATCTAAAT TAACTATTTA TAATTTTTGT AACAAAATTA AATTAATTGA CACTCCCCTA 25320

TAAAATAAAG AAGTTTAGAA TTTAATGTCT TCCAAACTTC TTTATTCCAT ATTTAATGAA 25380

ATGCCACCTT AACCGTGATA ATAGCTAGTC ATCAATAAAA AACTATTTGA ATAAGGATTC 25440

TCCATTTGAT TCAATCACTT CTTTATACCA AGTAAAAGAC ATTTTCTTAT ATCGATTTAA 25500

TGTACCACTT CCATCATCGT TTCGATCAAC ATAAATGAGA CCGTACCTTT TAGAAAGTTG 25560

TGCAGTGGAC ATAGAAACAC AGTCAATACA TCCCCAAGAC GTATAGCCCA TAATTTCAAC 25620

ACCATCCTGT AGAGCTTCAG CAACTTGCAA TAAATGTTCT TTCATATACT GAATTCTATA 25680

ATCATCTTGG ACGGTTAAGT TATTAAGTTC ATCTTTTATT AGTTGATCTT TAGCACCTAA 25740

TCCATTTTCT ACTATAAATA ATGGGATTTG ATAACGGTCA TAATATCTAT TTAAAATTAT 25800

ACGTAGTCCA ATTGGATCAA TTTGCCATCC CCACTCTGAA GACTCTAAAT AAGGATTTAC 25860

TAAACCACCA ATAATATTCC CTTCTCCTGA ATTATACTGT GTTGGAAGAG CAGATTGAGT 25920

CACACTCATG TAATAGCTAA AGGATAAAAA ATCTACGGTA TAATTTTTTA ATAACTCTGC 25980

ATCTTCAGCT GCAAACTCTA TGTTAATGTC ATTTTCCTTA AAATATCTTT TTGCATAATT 26040

CGGATAATAA CCTCTAACAT GCACATCTGA AAATAGATAA TTTAGATTCT CATACTCATG 26100

AGTCGCCCAT ACATCTTTTG GATTTGGAGT CATTGGATAA GCTGGCATAG CTAATACCAT 26160

ACATCCCACC TTAAACTCTG AATTAATCTC ACGAGCAATT TTTGTAACCA AACTTGAGGC 26220

GACTAATTCA TGATGTATAG CTTGATATAA TTCTTGTTTC GAAAGATTCT CCTTAGGTAT 26280

ATCTATTCCT CCACTAGTAA ATGGTAATTC CAAAACAGAG TTTACTTCGT TAAATGTAAG 26340

CCAATATTTA ACTTTATCTT TATACCTTTC TAAAACTGTT CGAGCAAATT TTTCATAAAA 26400

ATGAATCATT CTCCTATCAA CCCATCCATG ATATTTTCTT GCTAAATATA ATGGAGTCTC 26460

ATAGTGTGAA AGAGTTACAA GTGGTTCTAT CCCGTGAGCA TGTAGTTCAT CAAACAATTC 26520

ATCATAATAT TTCAACCCAG CTTCGTTAGG TTCTTCCTCA TCTCCTTTTG GAAAAATTCT 26580

ACTCCATGCA ATAGAAGTAC GAAAAACATT AAAGCCCATT TCAGAAAACA AGGATATATC 26640

TTCCTTATAT TTATGATAAA AATCAATACC TATCAATTTT AAGTTATCTT CTGTAGGATT 26700

TTCTGTTGCT TCTCCTAATC CACCTTTGGG TAACACATCC TGAACTGATA AGCCCTTACC 26760

ATCTTCATTA TATGCTCCCT CTACTTGATT AGCTGCAACA GCTCCACCCC AAAGAAAATC 26820

ATCTGGAAAA ATGGTCATAA CTTTCCTCCA TTATAATATT ACCAGTAATT CCTTAGAATG 26880

CTCGATTGTC TGATTATTAG GTAATACTAA TACATCTAGA AAATCATTGG TATTCGTTAC 26940

AATTACTGGT GTAACTGTTT CGTAGCCTTT AGTCTTGATT AAATTCAAGT CCATTTCAAA 27000

AATCAACTGA TTTTTGAAAA CTCTGTCTCC TTCTTCTACA TGACTAATAA AACCTTGACC 27060

TTTTAGCTCA ACAGTATCTA ATCCAATATG AATTAGTAAC TCAACACCCT CATCACTCTT 27120

CAATCCAATT GCGTGCTTAG TCGGAAAAAT ATTTGTAATT TTCCCATCAA ATGGTGCATA 27180

AACCTTACCT TCACTTGGGA TAATCGCTAC TCCGTCTCCA ATTAGTTTAT CTGAAAATGT 27240

TTTATCCTGG ACATCGCTTA ACGGAATGAT TTCTCCTGAT ATAGGAGAAA ATATCATTTT 27300

TTTATTTGAA ACTCCAGCTT CAACTTCTAA ATTGCTAGAA CTCTCTTCTT CATCGATTCC 27360

AAATATATAA GCTAATACAA AGGTAATAAC AACCGAAATG ACCGCCACAA TTAAAGCATT 27420

TACAATATTT GATGGCACAT CAGAATAAAT AAATTGAGGC AACGCTATCA AAGATGGGAC 27480

AGCAAATAGA TATGCTTTAA CACTAGTAAG ACCTGCAAAT AATCCCGCTA ATCCACCACC 27540

AATCATAGCT GCATAAAGCG GTTTTTTATA TTTTAAAGTC ACACCATATA ATGCAGGTTC 27600

GGTAATCCCT GCAAGTAAGG CTGAGAAACC TGCTGCAAAA GCAATTTGTT TTGTATTATT 27660

ATTTTTACTC TTTAATGCAA CAGCCATCGA AGCAGCCCCT TGAGCTAAGT TTGACCCTAA 27720

CATTGCTGGA AGAATTAATA CGTCTGGAGT AGCAATAGAT GCCGCCAAAA AAATAGGTGC 27780

AAAAGCCCAA TGCATTCCAG TCATAACAAT AAATGGCATA ATAGCACCAA GAATAGCTAA 27840

TGTAAGCCAT CCAGCTACAC CATACATTTG CCCAACTAGA TTTGATAATC CTTCACCAAC 27900

AATTACTCCA ATAGGTCCGA CTACAACTAA GGCAATACAG CTTGATACTA ATAATACTAG 27960

CGTAGGTTGC AAAAAACTCT TAGTAATAGC TAGTGTTAAT TTAGCAATTA TTTTTTCAAT 28020

ATATTTCATC AACCAAACCA TAATAAGAAT TGGAACGACT GATGAACCAT AACTAGCTGG 28080

TGTCACAGGT GCACCAAATA AACTAAGAGG ATTCCCTGAT TGCACCATTT GAACAAAATT 28140

TGGATGGAGA AGTACACCTG CTACAGACAT AGCTAATGTA GATGTTACTT TTAATTTTTG 28200

TGATGCAGAA TAAGCTAATA ACAGCGGTAA GAAATAATAT GGAGCATCCC CAAAAAATGT 28260

CAAAAAAGCA ATAGTCTGAG AATCTGATTG CAATATACCA AGCATTGGTA AAATGATTAC 28320

CAAGACTTTC AACATACCTC CCCCTAACAT TGCTGGAATG ATTGGAGTCA TGGAACCAGC 28380

GATATACTCA ATGATTCTTT CTAAAATATT CCCTTTGTGC CCTTGAACAA CTGAATCGGA 28440

TTCAAAATTG CCAAGTTTAA CGAATTCTTT ATAATAATTA GCTACATCAT TACCAAGTAT 28500

AATTTGATAT TGTCCATTCT TTTTCATAAT ACCTATTACA CCTGGTATCT TCTTCACATC 28560

ATCATCATTG ACTAAATTTT CATCTTTTAA TTCTAATCTT AAACGTGTTA CACAATGGGT 28620

AACTCTATTG ACATTTTTTT CACCTCCAAT TACATCGAGG ATTTTTTGTA CCGTATCTTT 28680

ATAACTCATG GTATTCTCCT ATTCTATTAA TCTAAATTTT TTGTTAAGCG ACGAATATGA 28740

GCCATCAAAT AAACTAATTC ACTAGAAGTC AGCAAATAAT TGTACTCCGT TTGTATAAAC 28800

ATTGCTACCT GTTCACCACA TTCATATTCT CTAGGATATT TATTTTTCAT TAATGCTAAC 28860

AAGTCTTCAT CATCATCGTC GG 28882

(2) INFORMATION FOR SEQ ID NO: 141:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 12835 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 141:

GCCTATGTCT TTTTCAAAAA AATGCTTGAC TTGAGACGGG AACTAGGGAA GTCTAAAGGC 60

GGAAGGCATT GATTTATACT CTTCGAAAAT CTCTTCAAAC CACGTCAACG TCGCCTTGGA 120

TTATATATGT AACTGACTTC GTCGATGCTT ATCTACAACC TCAAAGCAGT GCTTTGAGCA 180

ACTTGCGGCT AGTTTCCTAG TTTGCTCTTT GATTTTCATT GAGTATTATA TTACTTTCTA 240

TTTGTAGGAG GTGGCTTATG AAGATTCCTC TCTTAACTTT TGCAAGGCAT AAATTTGTTT 300

ATGTCTTGCT TACTTTGCTT TTTCTTGCTT TGGTTTATCG TGATGTTTTG ATGACTTATT 360

TCTTTTTTGA TATTCATGCG CCCGATCTAG CTAAATTCGA TGGACAAGCA ATTAAAAATG 420

ACTTATTAAA ATCAGCATTA GATTTTCGTA TTCTCCAGTT CAATCTAGGT TTTTATCAAT 480

CATTTATTAT TCCAATCATC ATTGTTTTGC TAGGTTTTCA ATATATTGAG CTGAAAAATA 540

AAGTTTTACG ATTGAGTATT GGAAGAGAAG TGAGTTATCA AGGGTTAAAA AGAAAGTTGA 600

CTTTGCAAGT TGCAAGTATC CCTTGTTTGA TATATTTAGT GACTGTGCTG ATAATTGCAA 660

TTATAACCTA TTTCTTTGGG ACTTTTTCTC CTCTTGGATG GAATTCTCTA TTTTCTGATG 720

GAAGTGGTTT ACAAAGACTC CTAGATGGAG AGATAAAAAG CTATTTGTTC TTTACTTGTG 780

TCCTACTAAT CGGTATTTTC ATCAATGCAA TCTATTTTTT ACAAATAGTT GATTATGTGG 840

GGAATGTGAC TCGTTCGGCA ATCACCTATT TGATGTTTCT TTGGCTTGGT TCTATGCTGC 900

TTTATAGTGC CTTGCCTTAC TATATGGTTC CTATGACGAG TTTGATGCAA GCTAGCTATG 960

GGGATGTAAG TTTGATGAAA CTCTTTACTC CTTATATCCT TTATATTGTC CCTTACATGG 1020

TGCTTGAAAA ATATGAAGAT AATGTTTAAG AATTTTAACA ATATTTTGCT AAATAGAAAG 1080

ATTGTTTTAC TACTTCGTAT AGTTCTGATG ATGATTTTGA TAAACCATCT ATTGTCAACA 1140

GCGGTTCAAA AGCAGGATGC TGTTATCTTT TTCAAGAGAG AATTGATTTC AATTTTTTCC 1200

TATAATGACT ATTCTGAAGC GAATTTAGAA ATCCCCAAAC TATTGTTAAA CCTTTCGCTT 1260

TTCATGGTAG GATGGCTCTC TGTCATTTTA CTTGAAAGTG ATTTGGCAGA CCATTACCAT 1320

CACTTGATTC GCTATCAATC AAGCTCCTTT TTCGATTATA CAAGGAAACG ATTGGTTGTC 1380

ATTTCTAAAT TTTTTACTCA AGATTTGTTT GTCTGGTTTC TTGGTTTACT TCCTCTAGGA 1440

ATTCATTTCA AAACAGTCGC ACTTTTCTTT TTACTTGCTC AGTTAATGAT GTTGTACTTA 1500

CTACTGTCTT ATCTGATAGC ACTGATTAGT GCGGGCGCTG GTTTTTCCTT TTTTCTCTAT 1560

TTTTTAGCAT TTGTGGGACA AGAATGGATG ATGGATCATA TTGTAACAGT GTATTTAGTA 1620

CTCTTAAGTT TATTAGTTAT GTTGATTGTT AGTCGCTTGG AAGAGAAATT TAAGAAAGGA 1680

TAAACGATGA GACTTGAAAT TATAAATGGA CAGAAAATTT ATGGGAAAAG ACCTATTTTA 1740

AATCAGTTGA ATTTGGTGTT TCAATCAGGA AAAATTTATG GACTTAAAGG TGATAATGGA 1800

TCTGGCAAGA CGGTTCTTTT AAAGATACTT GCTGGTTATA TTAAGCTTGA CAAAGGAAAA 1860

GTTCTTCAAG ATGGTAAAGT TTACGGGGTA AAAAATCATT ATATTCAGGA TGCAGGAATT 1920

TTAATTGAAA AAGTCGAGTT TTTATCTCAT TTATCCCTGA GAGAAAATTT GGAACTGTTA 1980

AGGTATTTTT CATCTAAAGT TACGGAAAAA AGAATTGCCT ATTGGATTCA ATACTATGAT 2040

TTACAGGAAT TTGAAGACAT TGAATACCGT CATTTATCCT TAGGAACAAA GCAAAAAATG 2100

GCCTTGATTC AAGCCTTTAT TTCCTCTCCT TCTATACTCT TTCTCGATGA ACCTATGAAT 2160

GCTTTGGATG AGAAGAGTGT GAGGTTAACC AAACAGGTCA TTTTATCTTA CCTGAAAAAA 2220

GAAAATGGTC TGGTTATCCT GACGTCGCAC ATATCGGAAG ATATTTCAGA CCTTTGTACA 2280

GATGTATTAG TTGTCGAAAA TGGACATATA CAAATGTAAA GGATATACAA TCCTAGGAGA 2340

TGGCTTATGG CACATCTAAA ATCATTTATT ACACGATATT CCAAGGTTTA TATTGGTTTA 2400

GTTCTGCTGA TCTGGCTGTC TTTCTTCTTT ATCCCTTGGG ATAAACCACT TCTGGGGATA 2460

AGGATTGACA TCTTCATCAT ACAGAAAATC TTGCTAGCTT TTGGAATTCT GTCCATTCTC 2520

ATGGCCTTGC TGTCCAAGAA AGTCAGTCTC TTTGTTTTTG GACTGATTTG CTGTCTTTCT 2580

CTTTGGATTA ACTTATTTAT CACATTTGCC ATTTTGCCGA TTTTTGGCAA TTAAACAGTC 2640

ATAAAAGTCG GAGAGGTTAG CTTGAAAACT AACCTCTTTT TCCTTTTCAA AATGGGGATT 2700

CTTCCTTGAA AATAATCAGT AATTGTGCTA AAATTAAAGG AACATTCTAA AATATTCGGA 2760

ATTTAAAGTA AGGAAAAACA TGGCTAATAT TTTAAAAACA ATTATCGAAA ATGATAAAGG 2820

AGAAATCCGT CGTCTGGAAA AGATGGCTGA CAAGGTTTTC AAATACGAAG ACCAAATGGC 2880

TGCTTTGACT GACGACCAAC TAAAAGCAAA AACAGTTGAA TTTAAGGAAC GTTATCAAAA 2940

TGGAGAATCA CTGGATTCAT TGCTTTACGA AGCATTTGCG GTTGTCCGTG AAGGTGCCAA 3000

ACGTGTCCTA GGTCTCTTCC CTTATAAGGT TCAGGTCATG GGGGGGATTG TTCTTCACCA 3060

TGGTGACGTG CCAGAGATGC GTACAGGGGA AGGGAAAACC TTGACTGCGA CCATGCCGGT 3120

ATACCTCAAT GCCCTTTCAG GTAAAGGGGT TCACGTAGTT ACGGTTAATG AATACCTGTC 3180

AGAACGTGAC GCGACTGAGA TGGGTGAATT GTACTCTTGG CTTGGTTTGT CAGTAGGGAT 3240

TAACTTGGCT ACCAAATCTC CAATGGAGAA AAAAGAAGCC TATGAGTGTG ATATTACTTA 3300

CTCAACTAAC TCAGAAATCG GATTTGACTA CCTTCGTGAC AACATGGTCG TTCGCGCCGA 3360

AAACATGGTA CAACGTCCGC TTAACTATGC CTTGGTCGAT GAGGTTGACT CTATCTTGAT 3420

TGACGAGGCT CGTACACCTT TGATTGTATC AGGTGCCAAT GCGGTTGAAA CCAGTCAGTT 3480

GTATCACATG GCAGACCACT ATGTAAAATC TTTGAACAAA GATGACTACA TCATCGATGT 3540

GCAGTCTAAG ACTATTGGTT TGTCTGATTC AGGGATTGAC AGGGCTGAAA GCTACTTCAA 3600

ACTTGAAAAC CTCTATGACA TCGAAAACGT GGCTTTGACT CACTTTATCG ATAACGCCCT 3660

TCGTGCCAAC TACATCATGC TTCTCGATAT TGACTATGTG GTGAGCGAAG AGCAAGAAAT 3720

CTTGATTGTC GACCAATTTA CAGGTCGTAC CATGGAAGGT CGTCGTTATT CTGATGGATT 3780

GCACCAAGCT ATTGAAGCCA AAGAAGGTGT GCCAATCCAG GATGAAACCA AGACATCTGC 3840

CTCAATCACG TACCAAAACC TCTTCCGTAT GTACAAGAAA TTGTCTGGTA TGACGGGTAC 3900

AGGTAAGACT GAGGAAGAAG AATTCCGTGA AATCTACAAC ATTCGTGTTA TTCCAATCCC 3960

AACAAACCGT CCTGTTCAAC GTATTGACCA CTCAGACCTT CTTTATGCAA GTATCGAATC 4020

TAAGTTTAAA GCGGTTGTCG AAGACGTTAA GGCTCGTTAC CAAAAGGGTC AACCTGTCTT 4080

GGTTGGTACA GTAGCGGTTG AAACTAGTGA CTACATTTCT AAGAAATTGG TTGCAGCTGG 4140

TGTTCCTCAC GAAGTCTTGA ATGCCAAAAA CCACTATAGA GAAGCCCAAA TCATCATGAA 4200

TGCTGGTCAA CGTGGTGCCG TTACCATCGC AACCAACATG GCGGGTCGTG GTACCGACAT 4260

CAAGCTTGGT GAAGGTGTTC GTGAACTTGG AGGACTTTGT GTTATTGGTA CAGAACGTCA 4320

TGAAAGTCGT CGTATCGATA ACCAGCTTCG TGGACGTTCA GGTCGTCAAG GAGATCCAGG 4380

TGAGTCACAA TTCTACCTAT CTCTTGAAGA TGATTTGATG AAACGTTTTG GTTCTGAACG 4440

CTTGAAGGGA ATCTTTGAAC GCTTGAACAT GTCTGAAGAG GCCATTGAGT CTCGCATGTT 4500

GACGCGTCAG GTTGAAGCAG CTCAGAAACG TGTCGAAGGA AATAACTACG ATACCCGTAA 4560

ACAAGTCCTT CAATACGATG ATGTCATGCG TGAACAACGT GAGATTATCT ATGCTCAACG 4620

TTACGATGTC ATCACTGCAG ATCGTGACTT GGCACCTGAA ATTCAGTCTA TGATCAAACG 4680

CACGATTGAA CGTGTCGTTG ATGGTCATGC GCGTGCCAAA CAAGATGAAA AACTAGAGGC 4740

AATTTTGAAC TTTGCTAAGT ACAACTTGCT TCCTGAAGAT TCTATTACGA TGGAAGACTT 4800

GTCAGGCTTG TCTGATAAGG CCATCAAGGA AGAGCTTTTC CAACGTTCCT TGAAGGTTTA 4860

CGATAGTCAG GTTTCAAAAC TACGCGATGA AGAAGCAGTT AAAGAATTCC AAAAAGTTTT 4920

GATTCTACGA GTGGTGGATA ACAAGTGGAC AGATCATATC GATGCCCTTG ATCAATTGCG 4980

TAACGCGGTT GGACTTCGTG GCTATGCTCA GAACAACCCT GTTGTTGAGT ATCAGGCAGA 5040

AGGTTTCCGT ATGTTTAATG ATATGATTGG TTCGATTGAG TTTGATGTGA CACGCTTGAT 5100

GATGAAAGCA CAAATTCATG AACAAGAAAG ACCACAGGCA GAACGTCATA TCAGTACAAC 5160

AGCGACTCGC AATATCGCTG CTCACCAAGC AAGTATGCCA GAAGATTTGG ATTTGAGCCA 5220

GATTGGACGC AATGAACTTT GCCCATGTGG TTCTGGTAAG AAATTTAAAA ACTGTCACGG 5280

TAAAAGACAA TAAAATGAGA TAGTTTAGAG GCGGATATCT TGTGAAAAGT AAATTTTTAC 5340

TGGGTATCCG TTTGCTTTAT AAGGAGATGA GTTATGGTAT TTACAGCAAA AAGCTCTAAA 5400

ATAAATATAG AAGAAGTTCG TGCCTTGTCA AAATTAGAAG GTCAGGCTTT GGAGAGGAAA 5460

TCACAGCGAG ATCAAGAGCT AGAAGCCATT ATACGTGGAG AAGACCAGCG AATTCTCTTG 5520

GTAATCGGGC CATGCTCATC TGACAACGAA GAAGCTGTCC TTGAATACGC TAAGCGTTTG 5580

GCAGTCCTAC AAGAAGAAGT GGCAGATCGT ATCTTTATGG TTATGCGTGT TTATACTGCC 5640

AAACCCCGTA CCAACGGAGA TGGCTATAAG GGCTTGATTC ACCAGCCTAA CGCGACAGAA 5700

GCGCCTAGTC TTATCAATGG AATCAAAGCC GTTCGCCATC TTCACTATCG TGTCATCACA 5760

GAAACAGGGA TGACAACTGC TGATGAAATG CTTTATCCTG AAAACCTTCC GCTTGTACAT 5820

GATTTGATTT CTTACATGGC AGTTGGTGCC CGTTCAGTTG AAGACCAGCA ACACCGCTTT 5880

GTGGCAAGTG GGGCAGGATT TTCTACTGGT TTTAAAAATC CAACCTCTGG AAATCTCAAT 5940

GTCATGTTTA ATGGGATTTA TGCTGCTCAA AACAAACAAA GTTTCCTTTT CTTAGGAAAA 6000

GAAGTAGAAA CAACTGGGAA CCCGCTTTCA CACGCTATTC TTCGTGGTGC TCTTAATGAG 6060

TATGGAAAAA ATATTCCCAA CTACTATTAT GACAATTTAA TTGATACCAT TGCCCAGTAT 6120

GAGAAAATGG GCTTGGAAAA TCCTTTTATC ATCATTGATA CCAATCATGA CAATTCTGGT 6180

AAGCAGTATA TTGAACAGAT CCGAATTGTC CGCCAGACCT TGATTAACCG TGCTTGGAAT 6240

GAAAAAATTA AGCAGTTCGT TCGTGGTTTT ATGATTGAGT CTTATCTGGA AGATGGTCGA 6300

CAAAATGAGC CAGAAGTATT TGGTAAGTCT ATCACAGACC CTTGCCTGGG TTGGGATAAC 6360

ACAGAAGCTC TTGTCAGAGA AATTTACAAA ACGTTAGGAG AATAAGATGG CATTTATTGA 6420

AAAAGGTCAA GAAATCGATA TGGAAGTCAT CAAGGCTGAA ACCCAATTGT CTGCGGAAGC 6480

CTTGAGACTC AAGGAAAGCC GTGACAGGGA ATTGGCAGAT ATTATTTCAG GGGAAGATGA 6540

CCGTATTCTC TTGGTGATTG GTCCTTGCTC TTCTGATAAT GAAGAGGCGG TCTTGGAATA 6600

TGCTCGCCGT TTATCTGCCT TGCAAAAGAA GGTAGCGGAT AAGATTTTCA TGGTCATGCG 6660

CGTGTATACT GCTAAGCCTC GTACCAATGG AGACGGCTAT AAAGGATTAG TTCACCAGCC 6720

AGATACTTCT AAGGCTCCAA GCCTGATTAA TGGCTTGCAG GCTGTGCGCC AGTTGCACTA 6780

CCGCGTGATT ACAGAGACTG GTTTGACAAC GGCAGATGAG ATGCTTTATC CGTCAAATCT 6840

GATCTTGGTG GATGACTTGG TCAGCTACCA TGCCGTTGGA GCTCGTTCTG TGGAAGACCA 6900

AGAGCACCGC TTTGTGGCTT CTGGGATTGA TGCACCAGTA GGGATGAAAA ATCCAACCTC 6960

AGGAAATTTG GGTGTTATGT TTAACGCCAT CTATGCTGCT CAAAACAAGC AAACCTTCCT 7020

TTATCATGGG CAGGAAGTTG AGACATCAGG TAATCCTTTG GCCCATGTTA TCCTCCGTGG 7080

AGCAGTCAAC GAGTATGGCA ATTATATGCC GAATTACTAC TATGAAAATC TACTCCAAGC 7140

CATTGAACGC TATGAAACCA TGGGACTTGA AAATCCTTTT ATCCTCATTG ACACCAACCA 7200

TGATAACTCA GGCAAGCAAT ATATGGAGCA GATTCGAATT GTTCGCCAGA CCTTGCAGAA 7260

TCGTGATTGG AATGAGAAAA TTAAAAAGAC GGTTCGAGGA TTTATGATTG AATCTTACCT 7320

AGCAGATGGT CGTCAAAACC AACCAGAGAT CTTTGGTTGC TCTATTACTG ACCCTTGCCT 7380

AGGTTGGGAA AATACAGAGG CCTTGGTAGA AGAGATTTAT GTTACCTTGA CAAAATAAGT 7440

GAAAAGGATG GAGTTGGGGA ATCTCAACTC CTTTTGATGA GAATGATAGT TGGACACGGA 7500

ATTGACATCG AAGAATTGGC TTCGATAGAA AGCGCAGTTA CACGACATGA AGGATTTGCT 7560

AAGCGTGTAC TGACCGCTCA GGAAATGGAG CGCTTCACCA GTCTCAAAGG ACGCAGGCAA 7620

ATAGAATATT TAGCTGGTCG CTGGTCGGCT AAGGAGGCCT TTTCCAAGGC TATGGGAACG 7680

GGCATTAGCA AGCTCGGTTT TCAGGATTTG GAAGTCTTGA ACAATGAACG TGGGGCGCCT 7740

TATTTTAGTC AGGCACCATT TTCAGGAAAG ATTTGGCTGT CTATCAGCCA CACCGATCAG 7800

TTTGTGACAG CCAGTGTCAT TTTGGAGGAA AATCATGAAA GCTAGTCCAC ATAGACCAAC 7860

CAAGGCTCTG ATTCATCTGG GAGCTATTCG ACAAAATATT CAGCAAATGG GGGCTCATAT 7920

CCCTCAAGGA ACGCTCAAGT TGGCTGTGGT TAAGGCCAAT GCTTATGGTC ATGGAGCTGT 7980

TGCCGTTGCC AAGGCAATTC AAGATGATGT TGATGGCTTT TGCGTTTCCA ATATCGATGA 8040

AGCCATTGAA CTCAGACAAG CTGGACTCAG CAAGCCAATC CTCATTTTAG GAGTTTCTGA 8100

AATCGAAGCT GTTGCTCTAG CTAAAGAATA TGACTTCACC TTGACAGTGG CTGGACTGGA 8160

GTGGATTCAA GCACTCTTAG ATAAGGAAGT GGACCTAACT GGATTGACAG TCCACCTCAA 8220

GATTGATTCA GGGATGGGAC GGATTGGTTT TAGAGAGGCA AGTGAGGTTG AGCAGGCTCA 8280

AGATTTGCTC CAACAACACG GTGTTTGTGT TGAAGGAATC TTTACCCACT TTGCTACTGC 8340

TGATGAGGAA TCAGATGACT ATTTTAATGC CCAGTTAGAA CGGTTTAAAA CTATTTTAGC 8400

TAGTATGAAG GAAGTTCCAG AGCTGGTTCA TGCTAGCAAT TCTGCAACGA CTCTTTGGCA 8460

TGTAGAGACT ATTTTCAATG CGGTTCGTAT GGGAGATGCC ATGTATGGCC TCAATCCAAG 8520

TGGAGCGGTC TTGGATTTGC CTTATGATTT GATACCGGCC TTGACCTTGG AGTCTGCTCT 8580

GGTTCATGTC AAGACAGTTC CAGCTGGAGC TTGCATGGGC TATGGAGCAA CTTATCAAGC 8640

GGATAGCGAG CAAGTCATCG CGACCGTGCC AATCGGGTAT GCAGATGGAT GGACAAGAGA 8700

CATGCAAAAT TTCTCTGTCT TGGTAGATGG CCAAGCTTGC CCAATTGTCG GCAGGGTTTC 8760

GATGGACCAA ATCACTATTC GATTGCCTAA GCTTTATCCG CTAGGAACCA AGGTAACCTT 8820

GATTGGCTCC AATGGGGATA AGGAAATCAC TGCAACTCAG GTAGCGACCT ACCGCGTAAC 8880

CATTAACTAT GAGGTGGTTT GCCTCCTCAG CGACCGTATT CCGAGAGAAT ATTATTAGAA 8940

AAGAAAGGAG TGGAGCATGA ATCTACATCA ACCCTTGCAT GTCTTGCCTG GTGTGGGACC 9000

AAAGTCAGCA GAAAAATACG CCAAACTAGG AATTGAAAAC TTGCAAGATC TCTTGCTCTA 9060

CTTTCCTTTC CGTTATGAAG ACTTCAAAAC CAAGCAGGTG CTGGAGCTGG AAGACGGTGA 9120

GAAGGCAGTT CTTTCTGGTC AGGTAGTGAC TCCTGCTAGT GTCCAGTATT ATGGTTTCAA 9180

GCGCAATCGC CTGCGTTTTA GTCTCAAGCA GGGAGAGGTC GTTTTTGCGG TGAATTTCTT 9240

TAACCAGCCC TATCTGGCTG ATAAAATAGA GTTGGGAGCA ACCCTTGCTG TCTTTGGAAA 9300

ATGGGACCGC GCTAAGGCTA GTCTGACTGG GATGAAGGTT CTGGCTCAGG TAGAAGATGA 9360

CCTCCAGCCT GTCTATCGTC TGGCTCAGGG AATCAGTCAG GCCAGTCTGG TCAAGGTCAT 9420

CAAGACGGCT TTTGATCAGG GACTGGACCT CTTGATAGAA GAAAATCTGC CCCAGTCTTT 9480

ACTAGACAAA TACAAACTCA TGTCCCGTTG TCAGGCAGTC CGTGCTATGC ATTTTCCAAA 9540

GTATTTGGCA GAATACAAGC AGGCTCTTCG CCGTATAAAG TTTGAGGAAC TCTTTTATTT 9600

CCAAATGCAG CTGCAGATGC TCAAGTCTGA AAATAGAGTT CAGGGAAGTG GTCTGGTTCT 9660

GAATTGGTCT CAGGAAAAAG TGACAGCAGT TAAAGTAAGT CTTCCTTTTG CCCTGACCCA 9720

AGCTCAGGAA AAGAGTTTGC AGGAAATTTT AACTGATATG AAGTCCGACC ACCACATGAA 9780

TCGTCTCCTA CAAGGGGATG TGGGGAGTGG AAAAACGGTA GTCGCTGGCT TGGCCATGTT 9840

TGCGGCAGTG ACAGCAGGTT ATCAGGCTGC CCTAATGGTA CCAACAGAAA TCCTCGCAGA 9900

GCAACACTTT GAGAGTTTAC AGAACCTTTT TCCCAATTTG AAACTGGCTC TCTTGACAGG 9960

TTCCTTGAAA GCTGCAGAAA AGAGAGAAGT CTTGGAGACC ATTGCCAAGG GTGAGGCTGA 10020

TTTGATTATA GGAACTCACG CTCTGATACA AGATGGGGTG GAGTATGCTC GTCTTGGTTT 10080

GATTATTATC GATGAGCAGC ACCGTTTTGG TGTAGGGCAA AGGCGTATTT TACGGGAAAA 10140

AGGTGACAAT CCAGATGTCC TCATGATGAC GGCGACTCCC ATTCCACGGA CGCTTGCCAT 10200

CACAGCCTTT GGAGATATGG ATGTTTCCAT TATCGACCAG ATGCCAGCAG GTCGGAAGCC 10260

TATTGTGACG CGCTGGATCA AACATGAGCA ACTACCTCAG GTCTTGACTT GGTTAGAGGG 10320

GGAAATTCAA AAAGGTTCCC AAGTCTATGT CATCTCTCCT TTGATTGAAG AATCAGAAGC 10380

TCTAGATTTG AAAAATGCCA TTGCCTTATC AGAGGAGTTG ACGACTCATT TTGCAGGCAA 10440

GGCAGAGGTG GCTCTTCTAC ATGGTAGGAT GAAGAGTGAC GAAAAAGACC AGATCATGCA 10500

GGATTTCAAG GAGAGAAAGA CGGATATTCT GGTTTCGACG ACGGTTATTG AGGTTGGGGT 10560

CAACGTTCCC AATGCGACTG TCATGATTAT CATGGATGCC GATCGCTTCG GTCTCAGTCA 10620

ACTTCACCAG CTTAGAGGTC GTGTCGGTCG GGGGGACAAG CAGTCCTACG CTGTTCTCGT 10680

TGCTAATCCC AAGACGGATT CTGGGAAAGA CCGCATGCGT ATCATGACAG AAACGACCAA 10740

TGGATTTGTC CTTGCGGAGG AAGATTTGAA AATGCGTGGT TCTGGTGAGA TTTTTGGAAC 10800

CAGACAGTCA GGACTTCCAG AGTTCCAAGT GGCTGATATT ATCGAAGATT TTCCGATTTT 10860

AGAAGAAGCA AGAAAGGTTG CTAGCTACAT TAGTTCTATA GAAGCTTGGC AAGAAGATCC 10920

AGAGTGGCGC ATGATTGCCC TTCATCTGGA AAAGAAAGAA CATCTGGATT AAGCTTTCTC 10980

TAAGGAAAAC TTATACTCAA TGAAAATCAA AGAGCAAACT AGGAAGCTAA CCGCAGGTTG 11040

CTCAAAACAC TGTTTTGAGG TTGTGGATGA AACTGACGAA GTCAGCTCAA AACACCGTTT 11100

TGAGGTGGCA GATAGAACTG ACGAAGTCAG TAACATATAT ATACGGTAAG GCGACGCTGA 11160

CGTGGTTTGA AGAGATTTTC GAAGAGTATT AAGCTAGTTT TTAGGTTTGG CTCTTATACT 11220

AGAGTCATCA AAAAGAAACG AGGACTCTCA TATGACAGTA ACGATTAAAG TAAATTACCA 11280

AACCACTTTC CAAAAGAAGG AAGCAAAAAA CTAGTATAAA CAGAAGAGAG AGCGAAATGC 11340

TCTTTTTTCG TTTCTAAAAC TACTTTCAGC CCATCATCCT AAAAGTAAAG AATCTAAATT 11400

CACTTTCTAT TTACCCTTCT TTCTTGCATT GATTACATAG ATATGCTACA GTTGTGGTAA 11460

CGATTACAAA ATAAAAGGAG CATGCTATGA AAAATCCAGC TTTGCTAGAA GAAATTAAGA 11520

CCTATAGAGG AAGGGATGAG GTTCCGGAAG ACTTTGATGA TTTCTGGGAT GGGGAAGTGA 11580

AAAATGTTTC CACGCTTCCA TCCTACCACT TGGAGGAAAG AGATTTCCAC ATTCCTCAAG 11640

TCAAGTGCTA TGAGTTAACA TTTGAAGGAA GCAAGGAAGG AAAGGTCTAT GCACGCATTG 11700

TTCTTCCAAA GAGTGAGGAG AAGGTCCCAT TAATCTTCCA TTTTCATGGT TATATGGGAC 11760

GTGGCTGGGA CTGGGCCGAC ATGCTGGGCT TCACCGTAGC TGGTTACGGT GTTGTTTCCA 11820

TGGATGTGCG GGGCCAGTCA GGTTACTCAC AAGACGGCTT GCGTTCTCCT TTAGGAAATA 11880

CCGTGAAGGG GCATATTATC CGTGGTGCTG TGGAAGGTCG GGACCACCTC TTTTATAAGG 11940

ATGTTTATCT GGATATTTAC CAGTTGGTCG AAATTGTTGC TAGTCTGTCT CAGGTTGATG 12000

AGAAGCGTCT TTCTAGCTAT GGTGCCTCAC AAGGAGGGGC TCTAGCTCTA GTTGCAGCAG 12060

CGCTCAATCC TCGAATTCAG AAAACAGTTG CCATTTATCC CTTCTTGTCA GACTTCAGAC 12120

GGGTGATTGA GATTGGTAAT ACTAGCGAGG CTTACGACGA ACTTTTCCGT TATTTCAAGT 12180

TTCACGACCC CTTCCATGAA ACAGAGGAGG AAATCATGGC GACCCTTGCC TATATCGATG 12240

TCAAAAATCT TGCCCATCGT ATCCAAGGTG AGGTTAAGAT GATTACGGGC TTGGACGACG 12300

ATGTTTGCTA TCCCATTACC CAGTTTGCGA TTTATAATCG TCTGACCTGC GATAAAACCT 12360

ATCGCATCAT GCCTGAGTAT GCTCACGAAG CCATGAATGT ATTTGTCAAT GACCAAGTCT 12420

ACAACTGGCT CTGTGGAAGT GAGATTCCTT TTAAATATCT AAAATAAGGA GTCGACTCTA 12480

AGCACAAAAT CTTAAAAATT ACAAACACGC ATAGTATCAG GGGATTAAGA AAACTTTATA 12540

CTATGCGTTT TATCATGGAA ATATAGTAAA ATGAAATAAG AACAGGACAA ATCGATCAGG 12600

ACAGTCAAAT CGATTTCTAA CAATGTTTTA GAAACAAATG TGTACTATTC TAGTGTCAAT 12660

CTATTATATT TATAGAATTT TTTGTTGCTA GATTTGTCAA ATTGCTTAAA ATAATTTTTT 12720

TCAGAAAGCA AAAGCCGATA CCTATCGAGT AGGGTAGTTC TTGCTATCGT CAGGCTTGTC 12780

TGTAGGTGTT AATACTTTTC AAAAATCTCT TCAAACCACG TCAGCTTCGC CTTGC 12835

(2) INFORMATION FOR SEQ ID NO: 142:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 5020 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 142:

GGGGATATGA AGAACAAAAG AATATTTAAA GACTTCCAAG CTTCAAAAAT GAGTTTAAAC 60

ATTTACACAA GCCCCTTGTT AGCCTTTGTT TTTGTCTTCA TAGGAGAGTT TGTGGCTTTT 120

ACTTTGTATG GTATTGGCTT GTTAGCTCTC ATCGGACTTG CTAGAAATTT TGGAGAGGCT 180

GGTCAAAATC TTGCAAGCTA CTTGCAGACC TTGCATCAGA GCTTGACGGA TAAAACAAGT 240

GACTTTCGTT TAATTTTAGG ATTACTGGCC TTTGGTTATT CTTAACACTG TGTTCAGATG 300

GACAAGAAAA GTTGAGAAAA GACCTATTCG AACCTTGGGA TTTTATAGAG AGAATTTCCT 360

CAGCAATCTT CTGAAAGGAT TTAGTCTAGG CCTGGCACTT TTTCTTCTGA CCTTGTTAGG 420

TTTAGTGGTC TTAGGTCAAT ATCGTTTGGA ATCCATTCAC TTGAATCCTT ATTCTCTTGC 480

CTTTGTCGTC TTTACTATCC CATTTTGGAT TTTACAGGGG ACAGCAGAAG AAGTGGTGGC 540

CCGTGCTTGG CTACTTCCTC AATTGGCCTC AAGAACCAAT CTAAAACTAG CTATTCTTAT 600

ATCTAGCCTG TTCTTTACCC TGCTTCATAT GGGCAATTCT GGTCTCACCC CTCTATCTCT 660

AGTAAATCTC TTTTTATTCG GAGTTGCCAT GGCTCTTTAC CTTCTCAAAA CTGATACAGT 720

TTGGGGTGTT GCAGGTATTC ATGGTGCTTG GAATTTTGCT CAGGGTAATC TCTTTGGGAT 780

TTTAGTTAGT GGTCAACCGT CAGaACGTCT CTGATGACCT TTTTACCACA AGGCAATCAA 840

GATTGGCTAT CAGGTGGTTC TTTTGGCATA GAAGGTTCCA TTATGACAAG TCTGGTATTA 900

CTACTGCTGA TTGTCTATCT TGCTAATAAA TTAAAGAAAG AAAATGAAAG GATGTGACTT 960

CGGTCCGTCC TTTTCTTCGT GAAAATACTA TAAGTATGCT AAAATAGGAA TAGCACATGG 1020

AGAGAGGATT CTTATGATCA ATCACATTAC AGATAATCAA TTTAAACTAG TATCAAAATA 1080

TCAACCATCA GGAGATCAAC CCCAAGCTAT CGAGCAGTTG GTGGATAACA TTGAGGGGGG 1140

AGAAAAAGCT CAGATTCTGA TGGGGGCGAC TGGAACAGGG AAGACCTATA CTATGAGTCA 1200

GGTCATTTCT AAAGTCAATA AACCAACTCT GGTTATTGCC CACAATAAAA CTCTGGCTGG 1260

TCAGCTCTAT GGGGAGTTTA AGGAATTTTT CCCTGAAAAT GCAGTTGAGT ATTTCGTATC 1320

CTACTATGAT TATTACCAGC CAGAGGCCTA TGTCCCTTCT AGCGATACCT ATATTGAGAA 1380

GGATAGTTCT GTCAATGACG AGATTGACAA GCTTCGCCAC TCAGCTACCT CAGCCCTTTT 1440

GGAGCGTAAT GATGTTATTG TCGTGGCCTC AGTCTCTTGT ATCTATGGTT TGGGTTCGCC 1500

CAAGGAATAC GCTGATAGTG TCGTTAGTCT CCGTCCTGGT CTAGAGATTT CTCGTGATAA 1560

ACTCTTGAAT GACTTGGTCG ATATTCAGTT TGAACGTAAT GATATTGATT TCCAACGCGG 1620

AAGATTTCGC GTTCGTGGGG ATGTGGTAGA GATTTTCCCA GCTTCCCGAG ATGAACATGC 1680

CTTTCGAGTA GAATTTTTTG GAGACGAAAT TGACCGTATT CGTGAAGTTG AGGCTCTGAC 1740

AGGTCAGGTG TTGGGAGAAG TGGATCATTT AGCGATTTTC CCAGCGACAC ACTTTGTGAC 1800

CAATGACGAC CACATGGAAG TTGCCATTGC AAAGATTCAG GCCGAGTTGG AAGAACAATT 1860

AGCTGTCTTT GAAAAGGAAG GTAAACTGCT TGAAGCCCAG CGTTTGAAAC AGCGGACAGA 1920

GTATGATATC GAAATGTTGC GTGAGATGGG CTATACCAAT GGGGTTGAAA ATTATTCTCG 1980

CCACATGGAT GGACGGAGCG AAGGAGAGCC TCCTTATACG CTTCTCGACT TCTTCCCAGA 2040

TGATTTCTTG ATTATGATTG ACGAGAGTCA TATGACCATA GGGCAAATCA AGGGCATGTA 2100

CAATGGAGAC CGTTCGCGTA AAGAAATGCT GGTTAATTAT GGTTTCCGTT TGCCGTCTGC 2160

TTTGGACAAT CGTCCTCTCC GTCGGGAGGA GTTTGAGAGT CACGTTCATC AGATTGTTTA 2220

CGTTTCAGCG ACACCTGGTG ACTATGAAAA TGAACAGACC GAGACAGTGA TTGAGCAAAT 2280

CATTCGTCCA ACGGGACTCT TGGATCCAGA GGTGGAAGTC CGTCCGACTA TGGGACAGAT 2340

TGATGACCTC TTGGGTGAAA TCAATGCCCG CGTTGAAAAA AATGAGCGTA CCTTTATCAC 2400

AACTTTGACC AAGAAAATGG CAGAGGATTT GACCGACTAC TTCAAGGAAA TGGGTATCAA 2460

GGTCAAGTAC ATGCACTCGG ATATCAAGAC CTTGGAACGG ACGGAGATTA TCCGTGACCT 2520

GCGCTTGGGT GTCTTTGATG TCTTGGTCGG AATTAACCTG CTCCGTGAAG GAATTGACGT 2580

TCCTGAAGTG AGCCTCGTAG CTATTCTCGA TGCTGACAAG GAAGGTTTCC TTCGCAACGA 2640

ACGTGGACTC ATCCAGACCA TTGGACGTGC TGCACGTAAT AGCGAAGGTC ATGTTATCAT 2700

GTATGCGGAC ACGGTTACCC AGTCTATGCA ACGTGCTATC GATGAAACTG CCCGCCGTCG 2760

CAAAATCCAG ATGGCCTATA ATGAAGAACA TGGTATCGTT CCACAAACCA TCAAGAAAGA 2820

AATCCGTGAC TTGATTGCTG TGACCAAGGC AGTTGCTAAG GAAGAAGACA AGGAAGTCGA 2880

TATCAATAGC CTCAACAAAC AAGAGCGCAA AGAACTAGTC AAAAAGCTTG AGAAACAAAT 2940

GCAAGAAGCA GTTGAAGTGC TTGACTTTGA ACTAGCAGCT CAGATTCGTG ATATGATGCT 3000

GGAAGTCAAG GCCTTGGATT AGGGGAATAG TATGATTTAT TTAAGAAAGT TAAAGAAAGA 3060

AGATTTGATG TCTTTATGGG AAATGGCTTA TTCACAGCTT AATCCAGTTT GGAAACAGTA 3120

TGATGCTCCC TATTATGATG ATTATCAGTA TTTTTCAAAT TTTAAAGAAT TCGAACTACA 3180

AAAATCAGAA TCCATTTTAA GCAACTCAAA TCGCCTTGGT ATTTTTGTTG ATGATAAACT 3240

AGTTGGGACT GTTTCGCGTT ATTGGGTATG TAAAGAAACA AGATGGATGG AATTGGGAAT 3300

TGGTATTTAT GATAAAAAAT TCTGGAACAC TGGTATTGGG AAAGTTGCTA TGTTGCAGTG 3360

GATAGATAGG ACGTTTCAGG ATTACTTGGA GTTGGAGCAT CTGGGTTTGA CAACTTGGTC 3420

AGGAAATATT GGTATGATGA AACTTGCTGA AAAATTAAGA ATGAAAAAAG AAGCTCATAT 3480

TCCAAAAGTT CGTTATTATC AAGGTAAATA TTTTGACAGT ATTAAATATG GTATTTTGAG 3540

AGAAGACTGG GAGAAAATAA ATGACGGTTA TTATCAAATC AATGGAAACT CCTGAAGAGA 3600

TAGAAGGTAA ATCCTTCGTT CACTGGCAAA CGTGGAGAGA GGCTTATGAT GACCTTTTGC 3660

CTGCGGAATT TCAGGAGACA ATGACATTAG AAAGATGTCG ACTCTTTAGT CAAAAGTATC 3720

CAGAAAATAC ATTGATTGCG ATGGATGGTG TGAAGATAGT TGGTTTTATA AGTTATGGCA 3780

ACTGTCGTGA TGAGACTATT CAAGCTGGTG AAATTATTGC TTTATATGTT TTAAAAGACT 3840

ATTATGGAAA AGGAATCGCA CAAAAGTTAG TGAAAGCAGC TTTGACTGAT CTTAATCATT 3900

TTTCTGAAAT TTTCTTATGG GTATTGAAAG ATAACAAGCG CGCCATTGCT TTCTATCAAA 3960

AAATGGGTTT TACTTTTGAT GGACAAGAAA AAATACTTGA ACTTGGAAAG CCTATAAAGG 4020

AAAAACGGAT GGTATTCTAT TCTAAATAAT TCTCAAAAGT AAAAGCTAAT ATGGTACCAA 4080

GTCTGAAAAT TTAATAAATT AGAAAGCGAG TAAATTTATG TCCCGTTCCC AATTAACAAT 4140

TTTAACAAAT ATCTGTCTGA TTGAAGACCT CGAAACTCAG CGCGTGGTGA TGCAGTATCG 4200

CGCCCCTGAA AACAATCGCT GGTCTGGTTA TGCCTTTCCT GGAGGTCATG TAGAAAATGA 4260

TGAGGCTTTT GCGGAGTCTG TCATTCGTGA AATCTACGAA GAAACAGGGT TGACTATCCA 4320

AAATCCTCAA CTTGTCGGCA TTAAAAATTG GCCACTAGAT ACAGGTGGGC GCTATATTGT 4380

CATTTGTTAT AAGGCGACTG AGTTCTCTGG TACCCTTCAA TCTTCAGAAG AGGGAGAAGT 4440

TTCTTGGGTG CAAAAAGACC AGATTCCAAA CTTAAATCTG GCCTATGATA TGCTACCATT 4500

GATGGAAATG ATGGAAGCTC CCGACAAGTC AGAGTTTTTC TACCCTCGCC GTACAGAAGA 4560

CGATTGGGAA AAGAAAATCT TCTAGTCTTT TACTAAATAA CCTAGCTGAT CCAAGGCCTC 4620

CTCGATATAG TGGAGGTCTT GTTGTGTCTC GGCTTCAACT AGGTGATAAT GAATACCATC 4680

TGTTAACTCA GAAATTGGCT TAAAGTCAGA ACGTTCAACT TGTTCTAGAA AATGTTGCAC 4740

GTCGCGGCGA CAGGTCAGTT TTAGTAAGGT TTCAATCTCT CCATAAACAG GATGATCAAT 4800

CAAGATATTT TGAACGCGAC CACCATTATC TACGATAGCA AGTAATTCTC GTCCAATTTC 4860

TTCAACTTCA TGCTTGACCT TAAATAATTT GTGATGATAA GTATTTGCAT TAGCATCTTT 4920

ATAGATATAA CCACGATTGG TAGATAGAAT TGGAGATCCA TCAGCTCTTA AAATTGCAAT 4980

ATCTTGAACA ATAACTTGTC GAGTGACATG AAAGTGCTCA 5020

(2) INFORMATION FOR SEQ ID NO: 143:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 4965 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 143:

AAAAAGTGGC AATCCATTGA TTGGCCACTT CATTTAGAGA ATTATCGTCT CGCCCTTGAA 60

GAAGAAGGTC GTGTAGTACT TGAGTTACTG CTATCGCTAG AACTACTACT TGAACTGCTG 120

GAGCTGGATG GAGTTGGTAG ACTCCCCACA ATACTAGACC AAGCATTCTG ATAATCCGCA 180

TCACTTCCGC CAATAGCAAA GCGATAACTT GTCGCTGGCG CTCCTGACTT ATTAGCCCAA 240

TAGCTGGTAA CAGTCGAACC TGTGACCTCT ACTTCTTTTC CTTCAACAGA AACCTTCTCT 300

GGTTTTTGAC CTGTTGATTT CAAGACTTCC GATTTCACTA CACTAGGATC TAAAGCAAAG 360

CGCTCGTTCC CCCAAATGCT TGGGGAAGCT TGCTGAATCG CATTTACCAG ATGAGCCATG 420

TAATTAGAGT TATTAGAATA ACCTGCTCTA CGTGACAATG AATGATTATC ATCATGCCCA 480

ATCCAGCCAC CTAGGGTTAA TCTAGGTGTC GAAAGCATGA GCCACATATT TTCGTCTTGG 540

TTGGTTGTAC CAGTCTTCCC AATCCAATCT GCATTAGCCA GAGTAGGATT TAAAGAAGTC 600

AGGTTAGACT TGAAGGTTGT TGTCACACGA GAGGATAGAA CTTCTCGTAG CAATCCCTGC 660

ATAATCGTCG CAGTAGCTTT TGAATAGACT TGAACCGGTT TATCCTGATA CTCATACACC 720

ACTCTACCAT CTGCTGCTTC AATCTTTGAA ATCACATGCT TCTGATGATA AACTCCATTA 780

TTAGCTAAGG TCTGATAGCC ATTGGTATGC TGGGCAACTG TGACTTCAAT ACCACCACCC 840

ATTGGCAAGC TCTCAATACC GTACTCAGGA ATCTCGTAAC CCATCTTTTC CATATAACCC 900

TTGACATCAA CACCCTTTTC ACGGAGCATA CGATAGGTCC AGTAAGCAGG GATATTCCAT 960

GAATAGTTCA GAGCTTCTCC CAAGGTCATC ATTCCTGTTC CCTTGCTATT AGCATACATA 1020

ATCGGATTGC CATTAGCAAA GTTTGTTGGA TAGTTAGATA GAATCGTTTC ACTTCCCATC 1080

AAGCCCTGGT CAATAGCAAT ACCGTAGGCC AGCAAGGGCT TGGTAGTAGA AGCTGGCGAA 1140

CGTTTGGTAT CAAAGGCATG ATTATTTTGA TTTTCTTGAT AATTACGACC ACCTACAAAG 1200

CCTAGAATAG CACCTGTTTG GTTATCCATC AAGACATTCC CTACTTCTAC ACGACCTGTT 1260

CCATCGTCTA AAAGATAGCC ATAATCAGCA ACCGCACTTT GCATGGCAGA ATGAATTTTC 1320

TGATCTATGG TAGTAGTAAT CTTATAACCA CCATTTTCAA TTTCCTTGGC TGCCAAATCT 1380

CGATAAAACT TCTGAGTTGC CTCATTTTTC AACTCCTTAG CGGAGACATT GTCTCTCTGA 1440

GCTAGATAGT CATACATACG TTCTTGAGCT TCTGCCAAAG TTGTAAAGTA TAAATAGTCT 1500

CGTGAAATTC CTGTAACCGT GCCCGATGGT AAAAAGTCCT GTTTAAGGTC ATAATCCTTG 1560

TACTGAGAAT ACTCGTCTTT GCTTAATGCA CCTGTACGAT ACATACTGTA AAGAACTGCC 1620

TTAGCCCGTC TTAAGCCAAT TTCTAGGTCT TCATCACTCT TCAACTCCCC AGTATTTTCA 1680

TAAGGAGAGT AAGTAATGGG ACTCTGTGGA AGTCCTGCTA AAAATGCTGC TTGAGGAACA 1740

GTCAACTGAC TGGCATCTAC ACCGAAAATT CCCTCAGCTG CTTGCCGAGC CCCTGCAATA 1800

TTCTGTCCCT TATTATTTCG GCCAAAGGGA GCCACATTGA GATAGGTCGT TAAAATCTCA 1860

TCTTTATTCA TGGCGCGTTC CAAGGCAAGA GCATCCACAA TCTCTGCCGC CTTACGAGCC 1920

AAGGTCGGCG CATCCCCAAC CACCTGCTGT TTAATTAGTT GCTGGGTCAA GGTTGAACCC 1980

CCACTAGAGG AACCCAAACC TACAAATTTC CCCAAGGTCG CACGAATCAC CGCCTTGGGT 2040

ACTACACCCT TATGTTCTTT AAAGTGTTCA TCTTCTGTCG CAATGATAGC CTTCTTCAGA 2100

TTTTCCGAAA TTTGCTCAGA TGAGATAGAA GTGCGCAACA AATCACTCTC TATGGAAGCA 2160

ATCACCGTCC CGTCCGAATA GGTAATCTCT GAAATAGAAG AGATGTCCTT GACCTGATTC 2220

ACCAATTCTT CTGTCTGAGG CACCCGAACC TTGTCAAATA AGGCCACTCC GTATCCCAAA 2280

GCAATCCCAG CTCCCAACAT TCCTCCTAGA AAACCGAGTA CAAAGAGTAA GTTAAATAAG 2340

GCTTTTATAC TCAGTAAAAT AGCTGGGAAA ATGACTGACT TATCTAAGGT TTTAGATTTT 2400

TTGGTACTTG AACCTTTCTT GCCAGGTCTA GCTGATTTTT TATTTTTTTG TTTTTGCTGG 2460

AAAAATTCCA GCATTTTTCG TTTTAATTCA TTTAATTGAT TTTGCATGGA TTTCCTCACT 2520

TTATCTATTA TACCACAAAA GGGAAATTTT CAATAAAATA GCCACTTTCT TCCCTATTCT 2580

GCTAGGCTAT TGCCCAAGTT TGTGATACAA TAGGTAGAAA CAATAATTTT AAAAAGGAGA 2640

AAAAACACAT GCACATTTTT GATGAGCTAA AAGAGCGTGG TTTGATATTT CAAACGACTG 2700

ATGAAGAAGC TTTGCGTAAA GCCCTAGAAG AAGGTCAAGT TTCTTATTAT ACTGGCTACG 2760

ATCCAACTGC TGACAGCCTT CACCTAGGCC ACCTTGTCGC AATCTTGACA AGTCGTCGCT 2820

TGCAACTAGC AGGTCACAAA CCTTATGCGC TCGTTGGCGG TGCTACAGGT CTCATCGGAG 2880

ATCCGTCCTT CAAAGATGCT GAACGTAGTC TCCAAACAAA AGACACAGTA GATGGCTGGG 2940

TCAAGTCTAT CCAAGGACAA CTTTCTCGTT TTCTTGACTT TGAAAATGGC GAAAACAAGG 3000

CTGTCATGGT CAACAACTAC GACTGGTTTG GCAGCATCAG CTTCATTGAC TTCCTCCGTG 3060

ATATTGGAAA ATACTTCACG GTCAACTACA TGATGAGTAA GGAATCTGTT AAAAAACGGA 3120

TCGAAACAGG AATTTCTTAC ACTGAGTTCG CTTACCAAAT CATGCAAGGG TATGACTTCT 3180

TCGTCCTTAA CCAAGACCAT AATGTCACTC TTCAAATCGG TGGTTCTGAC CAGTGGGGAA 3240

ATATGACAGC TGGTACCGAA TTGCTTCGTC GTAAGGCGGA CAAGACTGGT CACGTTATCA 3300

CTGTTCCACT AATCACAGAT GCAACTGGTA AGAAATTTGG TAAATCAGAA GGAAATGCCG 3360

TCTGGCTCAA TCCCGAAAAG ACTTCTCCAT ACGAAATGTA CCAATTCTGG ATGAACGTGA 3420

TGGACGCTGA CGCTGTTCGC TTCTTGAAAA TCTTTACTTT CTTGTCACTT GATGAGATTG 3480

AAGATATTCG TAAACAATTT GAAGCAGCGC CACACGAACG CTTGGCTCAA AAAGTCTTGG 3540

CTCGTGAAGT TGTTACACTT GTTCACGGAG AAGAAGCCTA CAAAGAAGCA CTTAACATCA 3600

CTGAGCAACT CTTTGCAGGA AACATCAAAA ACCTTTCTGT CAAAGAGCTC AAACAAGGAC 3660

TTCGTGGTGT GCCCAACTAC CAAGTACAGG CAGACGAAAA CAACAATATC GTGGAACTGC 3720

TCGTCTCATC TGGTATAGTT AACTCAAAAC GCCAAGCCCG TGAAGACGTC CAAAACGGAG 3780

CCATCTACGT AAACGGCGAC CGCATCCAAG AGCTTGACTA TGTCTTGAGT GACGCTGATA 3840

AGTTAGAGAA TGAACTGACT GTTATCCGTC GTGGGAAGAA AAAATACTTT GTATTGACTT 3900

ACTAAACTAT TCAACATTTA TCTATAAACA AAGGAGTTAA CCTCGAGAAA GGTAACTCCT 3960

TTTTGCTGTT AATAACTCTC ATCTATCTAT TTTTAATAGA CAGGCTACGC AGGACAATGC 4020

GCAAGGTTGT TAGATTATGT AAGATAGAGA GATTTGAAGG ACTGAACCAA TTAAATAAGC 4080

CAAAGCCAAT CAAACTACTA TTTACGACAA CGGTATCCTG AATATTTTTC TTGATGAGTG 4140

TTTGCAAAGA TGATGATAAC GAATCCAACT CTTGGAAGAA ATCCAAACGA TTATCTAACA 4200

ATAAGATATC ACTCATCTGC TTAGAAATAT CTGCACTCTC ATTCATCACC ACACCGATAT 4260

CTGATAGAGT TAAAGCCGCT GAGTCATTCA ATCCATCTCC AACCATCAAA ATAGTGTGAC 4320

CTGCTTTCTG CAGTTTCTCT ACTAACTCAA ATTTCCCATC AGGTTTCAAG TCTGTATAGA 4380

CCTGATCAAA GGGCAAATCT TTGACTAATT CCTCTGTCCT AATCAAGGTG TCTCCTGTTG 4440

CCAGAATCAA TTTTTTCCCC TGTGCCTTAA GTTTATCCAA GGCTGTTTTT GCTTCTTTTC 4500

TCAAAGGAGT ATGAATGCAG AACATTCCAA TCAATTCATT TTGATAAGCC AAGAATAAGA 4560

GATTGTAGTG ACTCTTGTAC TCTTCAATTA AAGCATTTTG TTCTGAACTG ATATGAATCT 4620

GCTCATCCTG CATCAAGACA TAATTCCCAA TAAGAACTGG TTGGCCATCT ATATGAGATT 4680

TGATCCCCTT GCTTGCGATA TATTGGAGTT TCCCATGCAT TTCCTCATGT TCAATTCCCT 4740

CTATCTCAGC TTGCTTGACG ATGGCATTAG CAATAGGATG ATAAATGTGT TCCTCAAGAC 4800

AGGCACTGAT TCTGAGAATA TCTTCCTCAC TATAGTCTCC AAAAGGTAAC ACCTTTTCAA 4860

CTATAGGATA ACTAGTTGTG ATTGTTCCTG TCTTATCAAA CAAGAAAGTA TCAACTTCCA 4920

GATATTTCTC CCTGTTGTGG CCTCTGGCTG TCATCTCTGT GCTGG 4965

(2) INFORMATION FOR SEQ ID NO: 144:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 3232 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 144:

CAGGGGCGTA TTACGTGACA ATTCAATGTA GGCTGTCGCT ACTTGCGCCA AAACAAGGAT 60

TCGATAATGT CGGATGATAC TAACGATTAA ACCGAGCAGA AAGGATCCCA AAATTCCCCA 120

AACTGCAATA TGCAAGGTCA GAAAGAATGC CTTTTGATAT AGTGGTAGAT ATTGTTCAAC 180

AATGGATCAA TCCAAAAATA GAACCTCCCA TCTAGAAATA ATACAGTTAT TGTAGCACTT 240

AAAATCTTCT TTGGATAATA TCTATTTTTT ATTGCCGTTA TAAGGATTTT TATCATAGAC 300

ATAAAATTTC TGAAATTTCC AAACAAAATA TTTTAAAAGT TTTGAAAAAG AGTTAAGATA 360

TTTTTGTAAT ACACAAAGTA AACGCTTACT TATTAAGGAG GACATTTTAT GTCATACAAA 420

ACAAGCAATG CAGAAGGTCA TGTAGATTTC ATCAATACCT ATGATTTGGA GCCAATGGCG 480

CAACAAGTTA TTCCTAAAGC AGCATTTGGC TATATCGCTA GTGGGGCGGG AGATACTTTC 540

ACTTCTTTCC AGTGATTTTA GCGTCAGGTT CTTTTTAGTT TTTAAAGATT ATCCGTGAAT 600

TTCTTGCTTA TTTATGATAA AATGGGAGTG TCGCAAAAAA TGACTCATCG TATTCAATTT 660

TGAGTAAAAC TAGGAGGATC CCATGTCTAC AGAACATATG GAAGAACTAA ATGACCAGCA 720

GATCGTTCGC CGTGAAAAAA TGGCTGCGCT CCGCGAACAA GGAATCGATC CTTTCGGAAA 780

ACGTTTTGAA CGTACTGCAA ATTCACAAGA ATTAAAAGAT AAATATGCCA ACCTCGATAA 840

AGAACAATTA CACGATAAAA ACGAAACAGC TACTATCGCA GGACGCTTGA TAACCAAACG 900

TGGTAAAGGA AAAGTTGGTT TTGCCCACCT TCAAGACCGC GAAGGCCAGA TTCAGATCTA 960

CGTTCGTAAG GATGCTGTCG GTGAAGAAAA CTACGAAATC TTCAAAAAAG CAGACCTTGG 1020

TGACTTCCTT GGTGTCGAAG GTGAAGTGAT GCGTACGGAT ATGGGAGAAC TCTCTATCAA 1080

GGCAACCCAC ATCACACACT TGTCTAAGGC TCTTCGTCCT CTTCCTGAGA AATTCCATGG 1140

TTTGACAGAC GTTGAAACAA TTTACCGTAA ACGTTACCTT GACTTGATTT CTAATCGTGA 1200

AAGCTTTGAA CGCTTTGTCA CTCGTTCAAA AATCATCTCT GAAATCCGTC GTTACCTTGA 1260

CCAAAAAGGA TTCCTTGAAG TGGAAACACC TGTTCTTCAT AATGAAGCCG GTGGTGCTGC 1320

TGCCCGTCCA TTTATCACCC ACCACAATGC CCAAAACATT GACATGGTGC TTCGTATCGC 1380

GACTGAGCTT CACTTAAAAC GCCTTATCGT GGGTGGTATG GAACGTGTCT ATGAAATTGG 1440

CCGTATCTTC CGTAACGAAG GAATGGACGC TACTCATAAC CCTGAGTTCA CTTCTATCGA 1500

AGTTTACCAA GCTTATGCAG ACTTCCAAGA CATCATGGAC TTGACTGAAG GCATTATCCA 1560

ACACGCTGCT AAATCAGTCA AAGGTGATGG CCCAGTCAAC TACCAAGGTA CTGAAATCAA 1620

GATTAACGAA CCATTTAAGC GTGTTCATAT GGTGGATGCT ATCAGAGAAA TTACTGGTGT 1680

CGATTTCTGG CAAGACATGA CTTTGGAAGA AGCTAAAGCT ATCGCTGCTG AGAAGAAAGT 1740

TCCAGTTGAG AAACACTACA CTGAGGTTGG TCACATCATC AATGCCTTCT TTGAAGAGTT 1800

TGTTGAAGAA ACTTTAATCC AACCAACCTT TGTCTATGGA CATCCAGTAG CTGTATCTCC 1860

ACTCGCTAAG AAAAATCCTG AAGACCAACG CTTTACTGAC CGTTTCGAGC TCTTTATCAT 1920

GACTAAGGAG TACGGTAATG CCTTTACTGA GTTGAACGAC CCAATCGACC AACTTAGCCG 1980

TTTTGAAGCC CAAGCTAAAG CCAAAGAACT TGGTGATGAT GAAGCGACAG GAATCGACTA 2040

TGACTACATT GAAGCTCTTG AATACGGTAT GCCACCAACA GGTGGTTTGG GAATCGGTAT 2100

CGACCGTCTC TGCATGCTCC TCACTGATAC AACAACTATC CGTGATGTAT TGCTCTTCCC 2160

AACAATGAAA TAAATTCTTA TCCTCTGGGT CTTATCAGAG GATTTTTTGA TTCAAAAAGA 2220

GACTGAATTT AAGGAGAAAA TGAAGTGTAG TATATTGAAA TTGAAATAGT ACACTTTGAT 2280

TTCTAAGACA TTGTTAGAAA TTGGTTTAAA TTCCCTAAGC AATTTGTGCA TGTTTTATTT 2340

CATTTTACGA TAGTACGCTG AAACTTTTCA AAAAGTACTA GAAATTGACT TGGATTCCCC 2400

AATTGATTTG TTCAGATTCA CTATAAATAA AAAATTAATA AGTGGGATAG GAAGTTAGCG 2460

TCAACTAGGA TAGTATCTTG CTTAAACAGT ATATATGGGA TTGATATAAG TCCATAGGTC 2520

CTATTAGAGG ATGTTCTGGT GTCTTATTCA CTTGTTTTTT ATAGTATTAG TAGATAGAAT 2580

CAGCAAATAA AAACCCAAAT CATTCATACC TCTCTCAACT AGATGTAACT TACAAAACCC 2640

CTGACCTCAT GAGCCACTTT CTTCCTCCTC ATGAGGTCAG TTTTACTTTC TGCTGTTCCA 2700

GTATCGTTTT TCCTCGCTAG ATTTCCTCAA AAGGGCAGAC TCCTCCCTTG GTGCGTCACA 2760

CGATTTTTTC ATCTCGACTG TTCTTTAATG CATCATTAAC GACGCTTTTC TTCTAGGTGG 2820

TTCATAAGGA ACAGGAAGAT TCAGGTTGAC TTTTCTAATC CTAGAATAAA GTGCTGAAAA 2880

CAATTCGGAA TAGGCATAGA GACTAGACAA TTTGAGGAGC TGCTTGCGTC CTGTTCGAAC 2940

ACATTTTCCC ACCACGTGAA GAAAAAGATG GCGGAAGCGT TTGATTGTTA AAGTTTGGAA 3000

GTCACCTCCA GCTAGATGTT TGAGAAAAAG ATAGAGATTG TAGGCGATAC AGCTCATCAT 3060

CATACGAACT TCGTTTTTGA TTAAGGTTGA ACTATCCGTT TTATCGCCAA AAAATCCCTC 3120

CTTCATCTCC TTGATGAAAT TCTCGGCTTG ACCACGTCCA CGATAAAGCT GAAACTGGTC 3180

TTGGCTTGTT CCACTCGTCA TATTTGTAAC GAGAGAAATA ACATCGTAGA AC 3232

(2) INFORMATION FOR SEQ ID NO: 145:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 10711 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 145:

CCGGAGAAAA TGATGAAAAG TTCAAAACTA TTTGCCCTTG CGGGCGTGAC ATTATTGGCG 60

GCGACTACTT TAGCTGCATG CTCTGGATCA GGTTCAAGCA CTAAAGGTGA GAAGACATTC 120

TCATACATTT ATGAGACAGA CCCTGATAAC CTCAACTATT TGACAACTGC TAAGGCTGCG 180

ACACAAATAT TACCAGTAAC GTGGTTGATG GTTTGCTAGA AAATGATCGC TACGGGAACT 240

TTGTGCCGTC TATGGCTGAG GATTGGTCTG TATCCAAGGA TGGATTGACT TACACTTATA 300

CTATCCGTAA GGATGCAAAA TGGTATACTT CTGAAGGTGA AGAATACGCG GCAGTCAAAG 360

CTCAAGACTT TGTAACAGGA TTAAAATATG CTGCTGATAA AAAATCAGAT GCTCTTTACC 420

TTGTTCAAGA ATCAATCAAA GGGTTGGATG CCTATGTAAA AGGGGAAATC AAAGATTTCT 480

CACAAGTAGG AATTAAGGCT CTGGATGAAC AGACAGTTCA GTACACTTTG AACAAACCAG 540

AAAGCTTCTG GAATTCTAAG ACAACCATGG GTGTGCTTGC GCCAGTTAAT GAAGAGTTTT 600

TGAATTCAAA AGGAGATGAT TTTGCCAAAG CTACGGATCC AAGTAGTCTC TTGTATAACG 660

GTCCTTATTT GTTGAAATCC ATTGTGACCA AATCCTCTGT TGAATTTGCG AAAAATCCGA 720

ACTACTGGGA TAAGGACAAT GTGCATGTTG ACAAAGTTAA ATTGTCATTC TGGGATGGTC 780

AAGATACCAG CAAACCTGCA GAAAACTTTA AAGATGGTAG CCTTACAGCA GCTCGTCTCT 840

ATCCAACAAG TGCAAGTTTC GCAGAACTTG AGAAGAGTAT GAAGGACAAT ATTGTCTATA 900

CTCAACAAGA CTCTATTACG TATCTAGTTG GTACAAATAT TGACCGTCAG TCCTATAAAT 960

ACACATCTAA GACCAGCGAC GAACAAAAGG CATCGACTAA AAAGGCTCTC TTAAACAAGG 1020

ATTTCCGTCA GGCTATTGCC TTTGGATTTG ACCGTACAGC CTATGCCTCT CAGTTGAATG 1080

GACAAACTGG AGCAAGTAAA ATCTTGCGTA ATCTCTTTGT GCCACCAACA TTTGTTCAAG 1140

CAGATGGTAA AAACTTTGGC GATATGGTCA AAGAGAAATT GGTCACTTAT GGGGATGAAT 1200

GGAAGGATGT TAATCTTGCA GATTCTCAGG ATGGTCTTTA CAATCCAGAA AAAGCCAAGG 1260

CTGAATTTGC TAAAGCTAAA TCAGCCTTAC AAGCAGAAGG AGTCCAATTC CCAATTCATT 1320

TGGATATGCC AGTTGACCAA ACAGCAACTA CAAAAGTTCA GCGCGTCCAA TCTATGAAAC 1380

AATCCTTGGA AGCAACTTTA GGAGCTGATA ATGTCATTAT TGATATTCAA CAACTACAAA 1440

AAGACGAAGT AAACAATATT ACATATTTTG CTGAAAATGC TGCTGGCGAA GACTGGGATT 1500

TATCAGATAA TGTCGGTTGG GGTCCAGACT TTGCCGATCC ATCAACCTAC CTTGATATTA 1560

TCAAACCTTC TGTAGGAGAA AGTACTAAAA CATATTTAGG GTTTGACTCA GGGGAAGATA 1620

ATGTAGCTGC TAAAAAAGTA GGTCTATATG ACTACGAAAA ATTGGTTACT GAGGCTGGTG 1680

ATGAGACTAC AGATGTTGCT AAACGCTATG ATAAATACGC TGCAGCCCAA GCTTGGTTGA 1740

CAGATAGTGC TTTGATTATT CCAACTACAT CTCGTACAGG GCGTCCAATC TTGTCTAAGA 1800

TGGTACCATT TACAATACCA TTTGCATTGT CAGGAAATAA AGGTACAAGT GAACCAGTCT 1860

TGTATAAATA CTTGGAACTT CAAGACAAGG CAGTCACTGT AGATGAATAC CAAAAAGCTC 1920

AGGAAAAATG GATGAAAGAA AAAGAAGAGT CTAATAAAAA GGCTCAAGAA GATCTCGCAA 1980

AACATGTGAA ATAACTGTTG CAAAATATAA GAAAGGATTT AGTATTTCCC TTGAATGCTG 2040

AATCCTTTTT TACATTTGTA AAGAAAGATT CTAAAATGTA CGGACCCCCA AAAGTTGGAG 2100

CCTCTTTTTG TCAGAATAGA GAAAATTTTT GTTAATTTTA CTTGTTTCCT ATTGCTTTCT 2160

CAGCTATTAT TTGTTATATT AAAAGTATAA TTATTTTTTA TTTATCAGAG TTAAGCATTG 2220

CACTTTCAGA GGAAGGAGTA TTTTTTAAAA AGAAAATGTA AACGTTTGCT CAAAAATGAA 2280

AGGATTTAGA AGTTTATGAA TAAAGGATTA TTTGAAAAAC GTTGTAAATA TAGTATTCGG 2340

AAATTTTCAT TAGGTGTTGC TTCTGTTATG ATTGGAGCTG CATTCTTTGG GACAAGTCCG 2400

GTTCTTGCAG ATAGCGTGCA GTCTGGTTCC ACGGCGAACT TACCAGCTGA TTTAGCTACT 2460

GCTCTTGCAA CAGCAAAAGA GAATGATGGG CGTGATTTTG AAGCGCCTAA GGTGGGAGAA 2520

GACCAAGGTT CTCCAGAAGT TACAGATGGA CCTAAGACAG AAGAAGAACT ATTAGCACTT 2580

GAAAAAGAAA AACCGGCTGA AGAAAAACCA AAAGAGGATA AACCTGCAGC TGCTAAACCT 2640

GAAACACCTA AGACGGTAAC CCCTGAATGG CAAACGGTAG CGAATAAAGA GCAACAGGGA 2700

ACAGTCACTA TCCGAGAAGA AAAAGGTGTC CGCTACAACC AACTATCCTC AACTGCTCAA 2760

AATGATAACG CAGGCAAACC AGCCCTGTTT GAAAAGAAGG GCTTGACCGT TGATGCCAAT 2820

GGAAATGCAA CTGTTGATTT AACCTTCAAA GATGATTCTG AAAAGGGCAA ATCACGCTTT 2880

GGTGTCTTTT TGAAATTTAA AGATACCAAG AATAATGTTT TTGTCGGTTA TGACAAGGAT 2940

GGCTGGTTCT GGGAGTATAA ATCTCCAACA ACTAGCACTT GGTATAGAGG TAGTCGTGTT 3000

GCTGCTCCTG AAACAGGATC AACAAACCGT CTCTCTATCA CTCTCAAGTC AGACGGTCAG 3060

CTAAATGCCA GCAATAATGA TGTCAATCTC TTTGACACAG TGACTCTACC AGCTGCGGTC 3120

AATGACCATC TTAAAAATGA GAAGAAGATT CTTCTCAAGG CGGGCTCTTA TGACGATGAG 3180

CGAACAGTTG TTAGCGTTAA AACGGATAAC CAAGAGGGGG TAAAAACAGA GGATACCCCT 3240

GCTGAAAAAG AAACAGGTCC TGAAGTTGAT GATAGCAAGG TGACTTATGA CACGATTCAG 3300

TCTAAGGTCC TCAAAGCAGT GATTGACCAA GCCTTCCCTC GTGTCAAGGA ATACAGCTTG 3360

AACGGGCATA CTTTGCCAGG ACAGGTGCAA CAGTTCAACC AAGTCTTTAT CAATAACCAC 3420

CGAATCACCC CTGAAGTCAC TTATAAGAAA ATCAATGAGA CAACAGCAGA GTACTTGATG 3480

AAGCTTCGCG ATGATGCTCA CTTAATCAAT GCGGAAATGA CAGTACGCTT GCAAGTTGTA 3540

GACAATCAAT TGCACTTTGA TGTGACTAAG ATTGTCAACC ACAATCAAGT CACTCCAGGT 3600

CAAAAGATTG ATGACGAAAG CAAACTACTT TCTTCTATTA GTTTCCTCGG CAATGCTTTA 3660

GTCTCTGTTT CTAGTAATCA AACTGGTGCT AAGTTTGATG GGGCAACCAT GTCAAACAAT 3720

ACGCATGTCA GCGGAGATGA TCATATCGAT GTAACCAATC CAATGAAGGA TTTGGCTAAG 3780

GGTTACATGT ATGGATTTGT TTCTACAGAT AAGCTTGCTG CTGGTGTTTG GAGTAACTCT 3840

CAAAACAGCT ATGGTGGTGG TTCGAATGAC TGGACTCGTT TGACAGCTTA TAAAGAAACA 3900

GTCGGAAATG CCAACTATGT AGGAATCCAC AGCTCTGAAT GGCAATGGGA AAAAGCTTAT 3960

AAGGGCATTG TTTTCCCAGA ATACACGAAG GAACTTCCAA GTGCTAAGGT TGTTATCACT 4020

GAAGATGCCA ATGCAGACAA GAACGTTGAT TGGCAAGATG GTGCCATTGC TTATCGTAGC 4080

ATTATGAACA ATCCTCAAGG TTGGGAAAAA GTTAAGGATA TCACAGCTTA CCGTATCGCG 4140

ATGAACTTTG GTTCTCAAGC ACAAAACCCA TTCCTTATGA CCTTGGATGG TATCAAGAAA 4200

ATCAATCTCC ATACAGATGG TCTTGGGCAA GGTGTTCTCC TTAAAGGATA TGGTAGCGAA 4260

GGCCATGACT CTGGTCACTT GAACTATGCT GATATTGGTA AGCGTATCGG TGGTGTCGAA 4320

GACTTCAAGA CCCTAATTGA GAAGGCTAAG AAATATGGAG CTCATCTAGG TATCCACGTT 4380

AACGCTTCAG AAACTTATCC TGAGTCTAAA TACTTCAATG AAAAAATTCT CCGTAAGAAT 4440

CCAGATGGAA GCTATAGCTA TGGTTGGAAC TGGCTAGATC AAGGTATCAA CATTGATGCT 4500

GCCTATGACC TAGCTCATGG TCGTTTGGCA CGTTGGGAAG ATTTGAAGAA AAAACTTGGT 4560

GACGGTCTCG ACTTTATCTA TGTGGACGTT TGGGGTAATG GTCAATCAGG TGATAACGGT 4620

GCCTGGGCTA CCCACGTTCT TGCTAAAGAA ATTAACAAAC AAGGCTGGCG CTTTGCGATC 4680

GAGTGGGGCC ATGGTGGTGA GTACGACTCT ACCTTCCATC ACTGGGCAGC TGACTTGACC 4740

TACGGTGGCT ACACCAATAA AGGTATCAAC AGTGCCATCA CCCGCTTTAT CCGTAACCAC 4800

CAAAAAGATG CTTGGGTAGG GGACTACAGA AGTTATGGTG GTGCAGCCAA CTATCCACTG 4860

CTAGGTGGCT ACAGCATGAA AGACTTTGAA GGCTGGCAGG GAAGAAGTGA CTACAATGGC 4920

TATGTAACCA ACTTATTTGC CCATGACGTC ATGACTAAGT ACTTCCAACA CTTCACTGTA 4980

AGTAAATGGG AAAATGGTAC ACCGGTGACT ATGACCGATA ACGGTAGCAC CTATAAATGG 5040

ACTCCAGAAA TGCGAGTGGA ATTGGTAGAT GCTGACAATA ATAAAGTAGT TGTAACTCGT 5100

AAGTCAAATG ATGTCAATAG TCCACAATAT CGCGAACGTA CAGTAACGCT CAACGGACGT 5160

GTCATCCAAG ATGGTTCAGC TTACTTGACT CCTTGGAACT GGGATGCAAA TGGTAAGAAA 5220

CTTTCTACTG ATAAGGAAAA GATGTACTAC TTCAATACGC AGGCCGGTGC AACAACTTGG 5280

ACCCTTCCAA GCGATTGGGC AAAGAGCAAG GTTTACCTTT ACAAGCTAAC TGACCAAGGT 5340

AAGACAGAAG AGCAAGAACT AACTGTAAAA GATGGTAAAA TTACCCTAGA TCTTCTAGCA 5400

AATCAACCAT ACGTTCTCTA TCGTTCGAAA CAAACTAATC CTGAAATGTC ATGGAGTGAA 5460

GGCATGCACA TCTATGACCA AGGATTTAAT AGCGGTACCT TGAAACATTG GACCATTTCA 5520

GGCGATGCTT CTAAGGCAGA AATTGTCAAG TCTCAAGGGG CAAACGATAT GCTTCGTATT 5580

CAAGGAAACA AAGAAAAAGT TAGTCTCACT CAGAAATTAA CTGGCTTGAA ACCAAATACC 5640

AAGTATGCCG TTTATGTTGG TGTAGATAAC CGTAGTAATG CCAAGGCAAG TATCACTGTG 5700

AATACTGGTG AAAAAGAAGT GACTACTTAT ACCAATAAGT CTCTCGCGCT CAACTATGTT 5760

AAGGCCTACG CCCACAATAC ACGTCGTGAC AATGCTACAG TTGACGATAC AAGTTACTTC 5820

CAAAACATGT ACGCCTTCTT TACAACTGGA GCGGACGTCT CAAATGTTAC TCTGACATTG 5880

AGTCGTGAAG CTGGTGATCA AGCAACTTAC TTTGATGAAA TTCGTACCTT TGAAAACAAT 5940

TCAAGCATGT ACGGAGACAA GCATGATACA GGTAAAGGCA CCTTCAAGCA AGACTTTGAA 6000

AATGTTGCTC AGGGTATCTT CCCATTTGTA GTGGGTGGTG TCGAAGGTGT TGAAGATAAC 6060

CGCACTCACT TGTCTGAAAA ACACAATCCA TATACACAAC GTGGTTGGAA TGGTAAGAAA 6120

GTCGATGATG TTATCGAAGG AAATTGGTCA CTCAAGACAA ATGGACTAGT GAGCCGTCGT 6180

AACTTGGTTT ACCAAACCAT CCCACAAAAC TTCCGTTTTG AAGCAGGTAA GACCTACCGT 6240

GTAACCTTTG AATACGAAGC AGGATCAGAC AATACCTATG CTTTTGTAGT CGGTAAGGGA 6300

GAATTCCAGT CAGGTCGTCG TGGTACTCAA GCAAGCAACT TGGAAATGCA TGAATTGCCA 6360

AATACTTGGA CAGATTCTAA GAAAGCCAAG AAGGCAACCT TCCTTGTGAC AGGTGCAGAA 6420

ACAGGCGATA CTTGGGTAGG TATCTACTCA ACTGGAAATG CAAGTAATAC TCGTGGTGAT 6480

TCTGGTGGAA ATGCCAACTT CCGTGGTTAT AACGACTTCA TGATGGATAA TCTTCAAATC 6540

GAAGAAATTA CCCTAACAGG TAAGATGTTG ACAGAAAATG CTCTGAAGAA CTACTTGCCA 6600

ACGGTTGCCA TGACTAACTA CACCAAAGAG TCTATGGATG CTTTGAAAGA GGCGGTCTTT 6660

AACCTCAGTC AGGCCGATGA TGATATCAGT GTGGAAGAAG CGCGTGCAGA GATTGCCAAG 6720

ATTGAAGCTT TGAAGAATGC TTTGGTTCAG AAGAAGACGG CTTTGGTAGC AGATGACTTT 6780

GCAAGTCTTA CAGCTCCTGC TCAGGCTCAA GAAGGTCTTG CAAATGCCTT TGATGGCAAT 6840

GTGTCTAGTC TATGGCATAC ATCTTGGAAT GGTGGAGATG TAGGCAAGCC TGCAACTATG 6900

GTCTTGAAAG AACCAACTGA AATCACAGGA CTTCGCTATG TTCCGCGTGG ATCAGGTTCA 6960

AATGGTAACT TGCGAGATGT GAAACTTGTT GTGACAGATG AGTCTGGCAA GGAGCATACC 7020

TTTACTGCAA CTGATTGGCC AAATAACAAC AAACCAAAAG ATATTGACTT TGGTAAGACA 7080

ATCAAGGCTA AGAAAATTGT CCTTACTGGT ACCAAGACAT ACGGAGATGG TGGAGATAAA 7140

TACCAATCTG CAGCGGAACT TATCTTTACT CGTCCACAGG TAGCAGAAAC ACCTCTTGAC 7200

TTGTCAGGCT ATGAAGCAGC TTTGGTTAAG GCTCAGAAAT TAACAGACAA AGACAATCAA 7260

GAGGAAGTAG CTAGCGTTCA GGCAAGCATG AAATATGCGA CGGATAACCA TCTCTTGACG 7320

GAAAGAATGG TGGAATACTT TGCAGATTAT CTCAACCAAT TAAAAGATTC TGCTACGAAA 7380

CCAGATGCTC CAACTGTAGA GAAACCTGAG TTTAAACTTA GATCTTTAGC TTCCGAGCAA 7440

GGTAAGACGC CAGATTATAA GCAAGAAATA GCTAGACCAG AAACACCTGA ACAAATCTTG 7500

CCAGCAACAG GTGAGAGTCA ATCTGACACA GCCCTCATCC TAGCAAGTGT TAGTCTAGCC 7560

CTATCTGCTC TCTTTGTAGT AAAAACGAAG AAAGACTAGT ATTTAGTAAA ACCTCTTAAC 7620

AAGATTACGG AAGCAGTCTC TATCTTTTCC AATGAGGTTT ATAGTACAGA AAAAGCCTGA 7680

GAAGATGTCT TCTCAGGCTT TTGTTAAGCA CATAAATACA ATAGTGCTAT GACAAAATCA 7740

CCCAGAAAAA TCTGGGTGAT AAATGTTATG GTTGTGCTGG TTGAGGATTC TGATTTTGTT 7800

GATCAGGGGT TGTATTTGAT TGTTGCGTAT TATTGTTAGG ATTGGTAGTC GTACTATTAT 7860

TTGTGCTTGG AGTGGTTGAG CTAGACTGTG AAGTTGAACT ATCTGATGAT GAGCTTGAAC 7920

TTTCAGTTGA TGGGGGTTGT TGTGGAGCAG GTGAGTTCCA CGTAGAACGA GCACCATTTT 7980

TAAATACGAA TTCTCCATTT CTGTAGAGCC CCTCTGGTAT ATTCCAATCT TCTGGATTGC 8040

TTCCTTCAGA CAGGTAGGTC ATCATAGAGC GGTAAACTTT GGCAGCGACC GTAAGGCCAT 8100

TGCCTACAAG TGGTGTCAGA CGGTTAGAAT AGCCTGTCCA TACAGCCATT GAATATTTAC 8160

GCGTATAGCC AGCAAATAGT TCATCAGGTG CTACAAATTG AGAGGTCTTG ATGTGGTTTT 8220

CAATTTCCTC GTCTGTATAG TTAGAGGTTC CTGTTTTACC AGCCTGAGGG AGCCAAGCAA 8280

GATAGGCATT TCGTCCAGTT CCATAAGTCA AGACTGTTTT CATCATGTCG GTCATCATAT 8340

AGGCTGTCGT TTCCTTCATG GCACGAGTTC CGACATTAGA GAACTCTTTT TCACTCCCAT 8400

CACTAAAGAC GACTTTATGG ATATACATTG GTTTATAGTA AGTTCCACCA TTTGCAAAGG 8460

CAGCGTAAGC AGCAGCCATC TTTTCACTAC TTGCTCCATA TTTTTTGTCT GATTCGGTTG 8520

TGTTACTTGA AATGGCATTT GAGTAGTGAA TACTTGGGTA GTCGATTCCT AGACCATTTA 8580

GGAAAGTCTT GGCGCGGTTG AGTCCGACCT TGTTTAGAGT TTCCACGGCT GGGACGTTTC 8640

GCGATTGTTG CAGGGCGTAT TGCAAGGTGA TGTTGCCAAA GTAGCCCCTA TCCCAGTTAT 8700

AAACAGGAGT ATTTGTCCCA GGGTAGTTAT AGGGCTCATC GTGAACGATA GTAGCAGTTG 8760

AATCGTAGAC ACCGTACTCC AAGGCAGGAG CATAGTCTGT GATCGGTTTC ATAGTTGATC 8820

CCCAGTCGCG GTTTGTTTCT ACTGCTTGGT TAATTCCGAA GGAAACATTA CTTGACTGAT 8880

GGCGTGCTCC TAGCTGGGCA ATGACTTTAC CGTTAGAAAC ATCAACAATG GTAGAAGCGA 8940

CTTGCAATTC ATCGTCTGGA TAGGCAACGT ATTCGTCTGT ATTGTAAATA TCCCACAGAT 9000

GTTTTTGAGC TTCTTGGTCT ACATTTGTGT AGACATCCAT CCCAGTTGTG AGTAGGTTAT 9060

AGCCTGTTTC TTCTTCAACT TGATTGATGA CTTCCTTGAG GTAATTATCC ATGTAAGCAG 9120

GGTAATTACT TGCTGATTTG AGACTTTGTA GTCCATCAGT AATTGGTGTA TTGACTGCTT 9180

TCTCATACTG TTCAGCAGAG ATGTAGCCTT GATTTTTCAT TTCAGATAAG ACCAAGTTTC 9240

GGCGGTCTTG GGCTGCTTCT GGATGTGAAT AGGGGTCATA TTGGTTTGGT GCCTGAGGCA 9300

TTCCAGCCAG CAAGGCTAAC TGAGGTAAAC TTAAATTATT GAGGTCTTTA CCATAGTAGT 9360

TTTGAGCTGC TGTCTGCATT CCATAGTTCC CATTAGACAT GTAGACCTTA TTTATATAGT 9420

AGGTCAAGAT TTCTTGCTTG GTTGCTTTTT GTTCTAACTG AATCGCTAAC CAAGCTTCCT 9480

GAGCCTTACG AGAAATAGTC TGGTCGGAAG TCGAAGTTGA AAAGTAAGTC AACTTAATCA 9540

ACTGTTGGGT GAGAGTTGAT CCACCTTGGA GGGAATTGCT TTGCAGATTG CGCAAGAAAG 9600

CTCCCAGGAT ACGGATGGTA TCAATCCCCC TGTGGTCGAA GAAGCGATGG TCTTCGATAG 9660

AAACGATTGC CTTAACCAAA TCTGTGGGAA TATCATTAGC TTGGGCATTG ACGCGGCGTT 9720

CAGAACCCAA GTCAGCAATG AGTTGATTTT TATTGTCGTA GATTTTACTA GAAGTTGTTG 9780

CAACTAGTTT ACTCTCGGAT AGGCTAGGAG CCTTGCTAAC GTAGTAGAAA AAAACTCCTC 9840

CGCCTAAGAC AATGGCTGCG ATAACCAAGC TTAAGAAGCT AATGCTCAGA TACTTGATTA 9900

GGCGCAGAAT CGTTGGTTTG TTCATCTTGT TTTACCACCT AATAAATGTT CTTTGATAAC 9960

ATTGAGATAA GGAATTTGAG GGAAGGCACC AGCCTTGATT TCATATCCAT ATTCTCGAAT 10020

ATATTCAAGT GGCATTGATT TTTGTCCCTT ATCTTGATGA TAGAAGCGAA TCAAATCGAA 10080

TGCCGGCAAT AAGTAGGTTT CTTGCTGAGA AGAAAAGTGA AGAAGGACAA AGCAGATTCC 10140

TTGTTGGGCA AGGACTTGTT CCATATGCTG AATCTGATGT GGATGAAAAT TTTTCATCGG 10200

AATCGCACGT TTTTGTTTTG TTTCCTTGAC TTCAAAGTCG ATGTAATATC CATTATAAAC 10260

GCCAGAATAG TCCGTCGTTG AAGCTTGTCG AAAATAGGCT TCAACAATCT TGGCACGACT 10320

TCGTTGTGGA TAGTCCACTT GTACGATTTG AATAGGAGTT GGTTTCTTAT GTATAACAGC 10380

CAAGCCCTGA GACAAATAGT AGTCGTTGGT AGCATTGATC ATCTTTTCAA AGGGTACCGA 10440

GCTCGAATTC GTAATCATGT CATAGCTGTT TCCTGTGTGA AATTGTTATC CGCTCACAAT 10500

TCCACACAAC ATACGAGCCG GAAGCATAAA GTGTAAAGCC TGGGGTGCCT AATGAGTGAG 10560

CTAACTCACA TTAATTGCGT TGCGCTCACT GCCCGCTTTC CAGTCGGGAA ACCTGTCGTG 10620

CCAGCTGCAT TAATGAATCG GCCAACGCGC GGGGAGAGGC GGTTTGCGTA TTGGGCGCTC 10680

TTCCGCTTCC TCGCTCACTG ACTCGCTGCG C 10711

(2) INFORMATION FOR SEQ ID NO: 146:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 11887 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 146:

TACATTCATT CCATCGGCTA CTCCATAATA CTTAGATAAA ACCATAGCTG AAGTCGAATA 60

CGGATACTGT AAAGTATTAT CAATTTTAAT CAAATCATCA TTACCGATAA TACTTCTGAT 120

TGCTTTTGGT AGTATGAACC ATACGTTGGT GAAATCTCAG ATAATGAAGA ATCATTAGAC 180

TCTGGACCTT TTTCTAGTGT CTCACTTACC TCATATTCTT CACCCTTACT AGAAATAACA 240

CTCAAAGCAG ATACTGTCGA TAACTGGCTA GCCAATAAAG TACTCGCAAT AATTGAAATA 300

CCCAATTTTT TATAAACAGT TTTCTTCATT ATTGTATCCT CCTAATGTAA TTATAGCGTA 360

CTATTCTAAA TTTCTTAATC TACTATAGAA TCAAGAAATC TACCACCTTC TTTAAATACC 420

CTCCATTATC ACATAAACAG GTAAACTTTT CAATTAATGA CTGCGCTTTT CAATCACGCT 480

AGAGGTACTT GCTTGCTTCT TTGATACTAA GTTCAGCCAT TCTTTCCTTG TTTTTCTCAA 540

TAAAGCATGT TACCCAAGTG GGATTCGTTT TGGAGTAGTC TCGCAGAGTC CAGCCAATGG 600

CTTTATTGAT AAAAAATTCT GTTTGGTTCA AGTTATGAAG GAGAATCTTT TCCATTAATT 660

GAGTATTGGT CTTCTCTTTT CTTAACAACT GGTGGTCAAT AGCGACACGT CTCAGCCAGA 720

TATTATCTGA TAGGCTCCAT TTTATACTCA ATGAAAATCA AAGAGCAAAC TAGGAAGCTA 780

GCCGCAGTTG CTCAAAACAC TGTTTTGAGG TTGCAGATAG AGCTGACGTG GTTTGAAGAG 840

ATTTTCGAAG AGTATTAAGA TTATTTCTTC TAGTTCAGGG TGTTCATACA CCAAACTCCC 900

TACTACTCGA TCTAGGATAT CTACCGTGTC CCACAAGGAT TTTGTCACGA CTAACTGCTC 960

TAGCTTAGGC AAATCGGTTT CCTTTAGATA AGACTGCATT GCTTTCAAAT AGTTAGCAGC 1020

CACATATTGG TATTTTCTAG GATCCTTTTC CCAGCAAGTG TCTGCAAAAT CCCAATCGAT 1080

AATCTTTGTT TTTTTCGCTT CTGGAAAATA TTTTATAGAG TTTATTTCTT TCAGGCACCG 1140

CAATACCTAG AAAAGAAAAT TGATGGCGCA TATAGGCTTC CATGGACCTT GCTTTTTTAG 1200

AGTCTTTTGC TGCTTCTAGC TCCTCAAGTA AATCTGCTAA ACTCATCTAA AACTCCTCTT 1260

GCCCCACCAA ATGGTGCTGA AAGGCATAGA CAGCCGCCTG GGTACGATCG CTGACTTCAA 1320

GTTTGGCAAG AATATTGGAC ACGTGGGTCT TGACCGTCTT GAGAGAGATA AAGAGGTCAT 1380

CTGCGATGCG CTGATTTTCG TAGCCCTTGG CGATGAGTTG GAGAACATCT CGCTCACGCG 1440

CAGTCAATTC TTCATGAAGT TCCATATGAT TGCGGTGGTA TTCAACCTTC TTGCTAACCT 1500

CTTGCTCAAT GGCCAGCTCG CCAGCAGCTA CCTTACTGAC GGCATGAAGC AATTCATCTG 1560

CACTAGAAGT CTTGAGCATA TAGCCTTTGG CACCAGCATC TAAGACTGGC ATGATTTTTT 1620

CATTGTCCAA ATAAGAGGTC ACAATCAAAA TCTTGGCTTC AGGCCATTCT TTAAGGATTG 1680

CTAAGGTCGC GTCAATCCCA TTCATCTCAG GCATGACAAT ATCCATGACA ATGACATCTG 1740

GACGCAGTTC CAAGGCCAAG TCAATCCCTT GAGACCCGTT GGACGCCTCA CCCACAACTT 1800

CTACATCGTC TTGGAGGTCA AAGTAGCTTT TCAAGCCCAA TCGGACCATT TCATGGTCAT 1860

CTACTAGTAA AATTTTCATC TTTACTCCTT TATCATTCCT TATCTAACAG GGGAATACGG 1920

ATATCAACCG CCAGCCCTTG CTTGGGAGCT GTCAAGAGTT GAACTGTTCC AGCCATATCT 1980

TCAACCCGCT CCTTGATATT TCGCAGTCCA TAACTCAAGT CGTCTAAGCT CCCTAACTGG 2040

AAACCAATCC CATTGTCCAC CACCTTCAGT TGCAATTCAA CATCTGTCTG ATAGAGGTAG 2100

ACATCTAGGC AAGATGCCTG GGCATGGCGG AGGGTATTGC TAATCAACTC TTGCAGGATA 2160

CGGAAGATAT GCTCCTCGAT TTTCTTAGGC AATTTCGTCA TATTCTGCTT GAGACTAACC 2220

CTAAGATCAC TCTTGTCCTC AAGCTCTTTT AAAAGAATTT GAATCCCTTC TATCAAGCTC 2280

TTCTGCTCCA GTTCAACTGG TCGCAAATGC AAGAGCAAAA CCCGCAAATC CTTCTGGGCT 2340

GTTTCTAAAA TAGCTGTGAC ACTCTGCAAC TGGGTCTGCA TCTTTTCTCT ATCCAATTTC 2400

AAAGCCTGCT GACTGATACC CGATAAAATC ATGTGGGCCG CAAACAACTC CTGACTGACT 2460

GTATCGTGCA AATCCCGAGC AATTCGCTTC CGTTCCTTCT CGATGATTTC CTCTTCCTGA 2520

GCAAGGCTCT GATTTTCAGC TTTTTGAAGA GCCTCTGTCA AAAGGTTAAG TTTACCTGAT 2580

AAGGACTTGA AACTGGCATC CAAATCTGGA TCTGCAACCT GAACCACTTC TTGCCCTGCT 2640

AATAAACGCT TGAGATTAGC CTGCATTTTT CTTAGAGAAA GCTCTTCGAT CCCTCGCCAA 2700

AACAGGGCTA AGAGACAGGT CATGGACATG CTGAAAACCA ACAATAAAAA GACAAATTTT 2760

TCTGTTTTTT CGACATCGTG CAAAAAGATA GACCAGTCAA AATCAAGTAT TTCCAGCAAG 2820

CTGTGGGAGA AAAAAAAGAC AAATAGGAAG GAGGTGAGAG CAATAATGAC ATAGGCTTGT 2880

TTTTTCATCC TCTAACCACC TCCACATCAC CAATCATAGT GGTCAAGAAA ATCTTGACAC 2940

TCTTGTTACT CTTGAGATAG TCTTTTGTTT CTTGATGATA GTGTTCATTG CGGAGGGCTC 3000

GCTTGGGCTG GTTGAAAAAA ATCAAATCCC CATAGAGACA GTTAACGCTG AGACTGACTT 3060

CCACATCTAC AGGTACGATG ATTTTGGTCG TTCCTACCAT CTTTCTGAGG ATAATGACAT 3120

TGTCATGATT GGTTAAGATG ACCCTCTCCA GATGAATAGT GTCCTTGCCC ATGAAGCGAA 3180

AGAGATTGAT ATCATCGAAT TGGCAAGTCT GGTAGCTTGA AAAATGATGA AGATTTCCAA 3240

ACCAACGATT TTTCTCCTTC TTAACCGTCA CGACCTCTTC AAAAACCAAA TTGGTCTGCT 3300

CTTTTTCCTG GTTCATCATC GGGTAAAGAA GAAAGAGGCT ATAGATAACC GCAACAAAAA 3360

TAGCTAGAAT CACAAAAGGA TTGAGCATAA CGATGAAAAA GAAGAGAATG GTTGCCGCTA 3420

CTAAAAGAAG ATTATTTCCC TCTTTACCAG TGTAGTAGCG AATCAAAAGC AAAAAGAGGA 3480

ATAGTATCAG CAGAAAACGC GAAAAATGCT CTGATACCAT CAAAATCAGA GCTCCTGTCA 3540

GAAGACAGGC TTCGATAAAT AAAAAGATTT TAAATTTTCT CATAGGTTCA TCCTCTCCCT 3600

TCTATTTTAT CACAATTCAA AAAAGTCACC TCAGTCTGAG GATGGAAAAA AGGCGCTGGT 3660

TACGCCTTTT TCATCTGATC CTTTGCTTCT TTTAATTTTC CATAAAGAAG ATAGTCTACT 3720

TTTTGTAGAT CTGCTATGGT GGCACAGTTA AGGGAACACA TAATCAAGCG TAGATCTGCT 3780

TTCCAGCCTT GGACAATGCC AATCACTTCT TCAACTGTGT AGGTTTCAAC CAATTCCAGA 3840

ACGGTTCGTG ACAATCCCAC AGCCTTAGCA CCAAAAACCA AGCACTTAAT CATATCCAGC 3900

GGATTCCGAA CCCCTCCACT AACCAAGAGT TCGACCTTAT CTTTCCATTC TTGGGCATTG 3960

AGAAGGGCCT GCATGGTAGA CTGACCCCAT TGATTGAGGT AATCACGCTG GCCACTACGA 4020

CGGTTTTCGA TATAGGCAAA GCTGGTGCCA CCACGACCCG ATAGGTCCAC TGTACGAACA 4080

CCGAATTCAT AGGCTCTTTC GATTGTCTTG GCATCCATTC CAAAGCCCAC TTCCTTGAGG 4140

ACAATAGGAA CGGGAATTTG CTTGCTATAA TCTGCTAGAT GCGATTGCCA GCTTCTAAAC 4200

TTCCTTTCTC CCTCGGGCAT GAGTAATTCC TGCATGACAT TGACATGCAC TTGCAATAGA 4260

ACAGGATTCA TCTCTTCTAC AGTCTGAAGT CCTAACTCGA CAGGCTTGTC CAATCCAATA 4320

TTGGTTCCAA GGAGGAGATT GGGATGACTA GACTTGACAG AAAAAGAATC ATCCGTTGGA 4380

TTTTTGAGGG CTGCGCTATA AGAACCCGTT ACAAATAAAA TACCACAGGA TTCCGCCACC 4440

TGAGCCAGCT TTTGATTGAT TTCTCTTCCC TTATTACTTC CACCAGTCAT GGCATTGATA 4500

TAAAAAGGAA AGTCCCACTT TCGACCAGCA AACTCTGTCG AAAGATCGAT TTCATCCAGA 4560

TTGTAAAGAG GCAAGGAAGA ATGAATCAGC TCCACCTCAT CAAAGCTATT ATAGGAACTT 4620

TTCTGCTCAA GGGCATAGAG GATATGCTCG TCCTTACGAT TTGTCGTCAT GTCCTATCCT 4680

TTCTTGATAT AAGAGCTCAA TCCCCAGATC GGCCCAACGA TTTTTTAAGG TTTTGGTTGA 4740

TTGCGCATCA AAACTCAGGG CGATGCCACA GTCACCACCA CCAGCACCAC TACTCTTGGC 4800

AACGGTCTGC AAATCTTGAC TGGCTTCTTT CAACTGTCTA AGCAAAGGCG TGTAAATATC 4860

TGTACTCAAG CCTTCTAAAA GCTTGCTGGC TACTTCTACT TGATCGATAA TCTTTTCTGA 4920

TTTCCCCTGT TCCAAGGCTT CTACCAGAGA AGTCACCGTT TCTTTTGAGG AAGTTAAAAA 4980

ATTTTGATTG ATATTTTGCT TGATTTGCTG GACCATGTGA CTCGATACAG CCACTTCCTT 5040

GGTCCATCCC ACTAAGAAAT CACATTCTAA AGTTGGTTTC ACTTGTGAAA TTGAAAAGCC 5100

CCAATCACGC TCCAGAACTG TCGCCAAGTT TTCTTCTTCT AACCAAGCAG CCACCTTCTG 5160

GCGATCAAAT GACTGGTAGA GAACCAAATC CTCTGCCACA ATACAGGCAA GGTCGCCCAT 5220

GGAACCATTG TCTCCTCGCT TAAGCAAGAC AGCGCTAGTC AGCTTGAACA AGAGCTCCTG 5280

ATCAACAGAA ACATCATACA GAGCCAGTAA AGCCTTGACA ACCAAGACAA CGACGCTGCC 5340

ACTAGAACCT AGACCAAACT TTTTCCCTTC TCGTTCCATT TTGCCACAGA TTTCTAGAGA 5400

AAAAGGTCTT AAATTCTGAC CACGAACAGC GAGGAAGTCT CCCATCAAAG CAATCGTTTC 5460

TTGAATCAAG CTATAGTCAG GATTAGGCCT TAAGTCCACT GCGAAATCAA ACATATCTGA 5520

ATAGATACGG TAGCTGTCAG AAAAAGCAAT CTCAGCCCTC ATATAGATGG GAATATCCTT 5580

TATCAAAGCT AACTGCCCTG GCTCTAAAAT AGCATATTCA CCTGCCCAAT AGAGTTTTCC 5640

GCAAGTTTTA ACAGCAATCA TCTTGACTCA AATCCTTTGT TTTTGACACA ATCAAGCGAT 5700

AACGATGACC GAAAATTTCT GATAAATGCT CCAAGTCTTT CTCCTGACAG AAGACCTTAA 5760

CATTGGGACC AGCATCCATG GTAAAGTAGC AGGCCTCTCC TTTCTCACGA AGCTGGCGAA 5820

CAAAGGCCAT AGCCTCATAA GAGGCATCCG TCAGATAAGA AAAGGCTGGA CTAGCAGTCT 5880

TTGTCGTAGC ATGCATAGCC AGGGCATTTT TCTCCGTTAA TTCTCCAATC TTGGCAAAAT 5940

CATTTTCCTT GAGATAAATC AGCATATCCT GATAGTCCTT CTCAGACTGA CGAACCCAGT 6000

CGTCGAAAGT CGTCGAGGTT TCCACACAAA GTTTCATCCC GTCACGGCTA GAGATTGGTT 6060

TTTTCTTGTC CTCTAGCACC AACATAATCA TAGCTAGTTT CAAGTCTGTC TCTACAGGGT 6120

AAATTTCTCC ACTATCCTTA TCCCAGGCTC CTAGTGGTCC ATAAAAACTC CGAGAAGAAG 6180

AACCTGAGGC AAATTTGGCT TCCTGTGCCA ACTGACTTCT ATCCAATCCA AGCTTGAAAT 6240

AAGCATTACA AGCCTTGACC AGGGCGGACA AACCACTAGA ACTTGAGGAC AGACCCGCTG 6300

CCGTAGGCAT ATTGTTTTGA GTATCGATAC GGACAAAGCC CTCACCAGCT GGACGATAAC 6360

GGTCAATAAT CTTACTCATC TTGGCATGCT CGACCTCATT TTGTAGCTGA CCATTGATGT 6420

AAAATTCGTC AGCTGTTACA TTGGCTGGTA AAGGCGACAA GGTCGTCTCT GTATACATAT 6480

TTTCCAAAGT TAGAGAAATA CTGCTAGTAG CAGGCACCAT CTCTTTTTCT TTTTTCTTTC 6540

CCCAATATTT GATAATAGCA ATATTTGCGT AGGAACGTAC TGTTACAGGC TCTCTATCCA 6600

TGTCTGAACA GCTCCTTTCT CTTCTAATCT TTCTGCTAGT TCTTGTGCGT GTGTCAAATT 6660

GGTTACCAAG GCTATGATAC AACCTCCTAG CCCACCACCG CTCATCTTGG CACCCAGAGC 6720

ACCATGGCTA AGAGTCGTTT CAACCAAAAA GTCTGCCTCA GGGCTACTGA CTCCAATTTC 6780

TTTTAAATGT AAATGCGCTT GACTGAGGAT TTGTCCCAGT CCTTCAGCAT CTTTTTGTGA 6840

AATCGCAACT TCTGCTTGCT GGGTTAATTC TCCCAAGGCA TGCAAAAACG GTAGGGCATC 6900

CTTGCCCTTA TTTTGAACCA CTTGGATGGC TTCACGAGTA TGACCATAAA CACCCGTATC 6960

GGCAATCACC AAATAGGCGG ATAAATCCAT CTCAAGTTCT GTAAATCCTA CGTTCTTGAT 7020

AAAGCGAATA GGTTGGTCAC TAAGACAGGT CTTAGCATCC AAACCACTAG GATTCATATG 7080

GGCAATCATT TCAGCTCGAT TGACCAAGAT TTCTAGTACA TCATGAGGCA GATCAGCCTG 7140

ATAGTAGTCA AATACTGCAC GAATGGCCGC TATGCTGATA GCCGCTGACG AACCCATCCC 7200

CCGTTTCTCA GGGATAGCCG AGTCAATCTC ACAACGAATG CAGGCTTCTG TGATATTCAA 7260

ATACTCCAGT GAGGCATAAA CCGCCATGGA CAAGGTATCC TCCTCATAAA GGCGCCAAGG 7320

ACTCTCTGCA GGAACTACCT TACAGGTCAC CTCCACCTCC AAAAGAGGCA GGGAAATGGC 7380

AGGATAACCG TAAACGACCG CATGTTCCCC TATTAAAATT ATCTTACTAT GTGCCTGACC 7440

GACACCAACT TTTTTTGTCA TTTTTTCCTT TTACTAGACG AAAAAACGTC TTATTTTTCA 7500

TACAAGTATT AATTCTTTCC TATCTATTTT ATTATATTTT CACAAAAAAA GCGATTGTTT 7560

CCATTCACAA TCGCTTCTTT CATTATTGAA CCCATTCGCC ATTATAGTTG ACAGAATAGC 7620

CATCTACGGT CGTATTCACT GCCAAGGCAC CTGAGCGCTA TAAGCGTAGT ACCATCTGCC 7680

ATTGACCTGG AACCAACCTG TCGTCATAGA ACGACGAAAG AAACTCCATA CCATTAAGTA 7740

AAGAGGAAAG TCGTGAGGGA GCATGCGCCA TTGACAACCT GTTTTAGTGA CGTACAAAGT 7800

CTCATTAACA AGTACTCGTT TCGGCCATTT ATAGGTGCGG TGTTTGGAGA AATAGGGTTC 7860

AATCTTCGCC CATTCTTGAT CGTTTAAATC AGTATCATAT GCTTTGCGTA TCATAACTCT 7920

AGCTTAACAT TTTTTTGTGA ATACAGGTTC TAAATAATCG ACCACGAAAA TTTCTTAAGT 7980

GGAAAACGCC TTATGAAGTA TGCTACGGGA AAGTTATGCA CTTAATTTGA CAATTCAAGA 8040

TGTAAAAATA TATACTATAG TAGATTGAAA CTAGAATAGT ACACCTCTAC TTCTAAAATA 8100

TTGTTAGAAA TCGATTTGAC TGTCCTGATC GATTTATCCT GTTATTATCT CATTTTACTA 8160

TAATATTTGA TAAGTTATCC TAAAAGTATT ATTATGTTGT TGTGTTATAG ATTGATTGAA 8220

TCTAACTAAA GGATCCTATT CAATTACTAG AACTATCACA TACTCAAGGT CAGCTCACAG 8280

ATGAGCAACT ATTTTGGTTA CAATGTCTAC TAAATTTAAG TCAAACAAAT AATTTAGTCA 8340

AAATTAAAAA AATAGAGGAA CATAAATATG ATTACAAAAC AGAATGTAAT AGTGTTCTAC 8400

AATTTTTACT AGATAAAACT GTAAATTCTG AAGGAAGGAT CACTTCTTCA ACAGAATTTG 8460

GAAATTTCGT AAGTAATTTA TCATTCCAAC ACGGAATAGC TGGACTACTG TTTCCTCTAA 8520

ATAAATTGTA CCCCCCAGAA CTGGATTCTA AAATACTCTC TATCATCAAG AAGGCAGTGA 8580

CAATTAGAAC GACACACACA TATGAATATC AATACTCACT GCTATTTGGT GATGCAGGCT 8640

ATCTATGGTT ACTCCTACAT TTATTTTCTA TCAGTAAAAA TCAATACTAT CTACAATTAG 8700

CAAACGTCAC CGCTAAAAAA TTAATAGAGA ATTATGATAC TCTAGAGGAA ATAGACTTTG 8760

CATTGGGAAA ATCTGGTGTC CTATTATCAT TAATAAAATA CTATCAATTT ACCAATGACA 8820

ATACTCTTAA AATTTTCATC CACAATAGTA TAGGGGAAAT TTATCATTAT TTCCTACAAA 8880

GAGATACAGC CAAAGAAAGC ATTTTAGACT ATAGCTTTGC TCATGGATAT TGTGGAATTG 8940

CATATGCTTT ATTTGCCTAT TCTAAAGTCT TAGAACCTTC TATGTTTTAT AATGATCTCC 9000

ATACATTCCA TACTGAATTA AAAAAATTAT TAGAAAAAGT TACTTCTAAT ACTGAAAATT 9060

TAGGAAATTT ACAACTTTCT TGGTGCAAAG GAATTTCCGG AATAATCTTA TATCTTTGTA 9120

TGTACGATTG TGACGGAAAC AAAGATATTA TTAGTAAATA TCAAGAATTT GTTTTTAACC 9180

ATCATCTAAA AATGATGACA GGATATTGCC ACGGAATAAC TAGCTTACTA CAAACCACTG 9240

TCTACAATCA AAACAAATTA CTGATGAAAA AAATCCAACA GGTAATTTTA GCATGTTCTG 9300

AACGAGATGA TCACGGTTTA CTGATGTTTC AAGGAGATAG TGGTAAAGCA GATTTGTTTG 9360

ACTTCGGAAT AGGAAGCATG GGGTATATTG GTGTCTATTA AATAATAAAT TCCCATTCGA 9420

TGTGCAGACA TAAGGAGAAA AGTATGAAAT TATTTTGGAC AAACAACATA TATAGACAGT 9480

TGCTGCTAAA CAGCTGTTTT TCATCATTCG GCGACAGTAT TTTCTACCTC GCCATTATCA 9540

ATTATGTGGC TCAGTACAAT TTCGCTCCGC TAGCGATTTT ACTGATTTCC ATTTCAGAGA 9600

TGGTTCCCCT ACTATCGCAA CTCTTTCTCG GGATTCTAGG AGATTTTCAA GAAAATAGAG 9660

TCAAACACGC ACTCTGGATT GCCAAAATCA AAATCCTGCT CTACGCTATT TTGACAGTAT 9720

TTCTCGTCTT GTCGCCCTTT TCATTAGTTT CAGTCATTAT GATTGTCATC ATCAACCTCA 9780

TCTCTGACAC CTTGAGCTAC CTGTCTGCCT ACATGATGAA CGCCCTCTAC ATCAGTGTAA 9840

TTAAGGACGA CCTGCATGAT GCCATGGGGT TCAGGCAGTC TCTGATGAGG GTTGTCCGTA 9900

TTGTCGCCAA TCTGGCTGGC GCATTCCTTA TCAATGTTAT AAGTATTCAA ACTATTTCCC 9960

TTATCAACAC TCTGACTTTT GTCATTGCCT TTTTGGGCCT GTATGTTATT CGACATACCT 10020

TGTATGAGGT TGAAAAAAGA ATTGAAATGT CACATACAGC ACTGAGTTTT AAGAAATATT 10080

TTCAACATCT TAAACAGTCG CTGGCTGTGC TCCTGAGGTT AAAAGATACC GTCATACTAC 10140

TGTTTCTGAC GACCAGTATG ATTGCCATCT TGGATGTGTC CCCTCGGCTG ATTGCCCTCC 10200

GCTTCATCCA ACAGACACTA GCACAACTGA GCATTGGGCA ACTCCTCGCC CTGCTCTCCA 10260

TCATCATGTC TTGTGGAGCT ATCCTTGGCA ATATGACCAG CAGTAATCTA TTTAAAAATA 10320

TCCGTTTCAC GCACCTCTTG GTTTTCTGTG AGATTTCCCT ATTGACTCTA ATAACTAGTA 10380

TCCTTTGTCA AGCCTATATC GTAATTTTCA TGACCAGTTT CATCAGTTCT ACGATTATCG 10440

GCATTCTCAG CCCTCGCCTA CAAGCAGCTG TCTTTGCCCA TATCCCCAGT GACAAGATGG 10500

GGACGGTGGG CTCTGCTCTG AGCACAGTGG ACATTCTCGC CCCGTCCCTG CTCTCCCTAT 10560

TAGCCCTATC CATAGCATCG GGCGTTTCGG TGCAGTTAGC ATTGATATTT TTGTATCTTA 10620

TTTTAATTGC TCTTATCTTT TGTCAATGGT TAGTCAAGTT CAACACTCAT AACTAACGAA 10680

AAAGCATGTG TAGATTTCAC ATGCTTTTAA TCTCCCCAAT CGTCAGGTCA AGTACAACAA 10740

AGTCACTTCT TTGATTAAGC GAGTGTTCTA ATATAATTAT AAGCGCCCTG TCATTACCGA 10800

ACCCATTCGC CATTATAGTT GACAGAATAG CCATCTACGG TCGTATTCAC TGCCAAAGCA 10860

CCTGAGCTAT AAGCATAGTA CCAGTTGCCA TTGACCTGGA ACCAACCTGT CTTCATGTCT 10920

CCATTACCTG CATTTAGGTA GTACCAAGTT GAACCATCTT GATACCAACC AGTTGCCATA 10980

GCTCCTGATG AACGGAGATA GTACCATTTG TTCCCAAGGT TTTGCCAACC TGTTTTCATA 11040

TCGCCATTTG GGTGGTCTAA ATAATACCAA GTGGTACCTT CCTGATACCA GCCAGTGGCC 11100

ATTGCTCCTG AGGAACGGAG GTAGTACCAC TTATTACCTA GATATTGCCA ACCTGTTTGC 11160

ATAATACCAG TTGTTGGATC TAGGTAGTAC CAAGTCGAAT CATCGTTTAT CCACCCCGCA 11220

CGTCTTTCAC CACCAAGGTA GTTTTCTCCA TTAATTTCCG TCTTAGCTAG ATAATACCAG 11280

TTAGACTGAT CATAAAGCCA ACCTGTCTCT AAAGAATGAT TTTGATTAAA GTAATAGTTC 11340

GTATAATAAC GCTTCTCTTC TTTATCTTCT GAATCTTCAC GTTTTTCCCC GTACTTTCTT 11400

CCAACACTGT CTTTAGTTTT AATCTCTAAT GTTTTCCAAC CAACAAACTC TTGTAGCACT 11460

CCATTTTTAT CGAAGTAGTA CCACTCTGAC TTTGGAAAAC CTTCTAATCT GATACCATTT 11520

GGGTAAGGAC CAATTGTACT ACCTTTAGAT GGAAACGGGA TATATTGCCA GCCGACAACC 11580

ATCTCTCCAG ATAGAGAATC AAAATAATAG TACTTACCAT CAATCACTCG CCAGTAGGTT 11640

TCTTTGAGGT CCCCCTTTTT GTAGTAGGTT CTTCCGTTTT CTTGGACAAA CTGCCATCCT 11700

TCAGAATCAT CTGCAAATAC TGTACTGGTC CCTAGCAAAC CAAAGAAAAA TACTGTCAGT 11760

CCAACTTGCA TAGTTTTTTT CAAAATTTTC ATCTATATAC CCTCCAATAT TAAATCCACT 11820

CACCAGATGA GGCGAAATTA TAAACTTTAC CATCGATAGT TTGGCTACCT GTAACCATTG 11880

CTCCAGG 11887

(2) INFORMATION FOR SEQ ID NO: 147:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 11340 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 147:

CCGGTATGTT CTGGAATACT ACCAATCTAA GCTGGCTGTG CCCTACAGTT TTACAACCCT 60

GTACGAATAC CTTAAGGAAT ATGACCGATT TTTCAGCTGG GTTTTGGAGT CTGGTATTTC 120

AAACGCTGAT AAAATATCCG ATATTCCTTT ATCAGTTTTG GAAAATATGT CTAAGAAAGA 180

CATGGAATCC TTTATCCTTT ATCTACGTGA ACGTCCCTTG CTGAATGCTA ATACAACAAA 240

ACAAGGTGTT TCACAGACAA CTATCAATCG AACCTTATCA GCACTTTCTA GTCTTTACAA 300

GTATCTAACC GAGGAGGTTG AAAACGATCA GGGGGAACCT TATTTCTATC GTAATGTAAT 360

GAAAAAAGTT TCCACCAAGA AAAAGAAAGA AACCCTTGCT GCCAGAGCTG AAAATATCAA 420

GCAAAAACTC TTTCTAGGTG ATGAAACAGA AGGTTTTCTA ACTTATATCG ATCAAGAGCA 480

CCCACAACAG CTTTCAAATC GAGCTCTCTC ATCATTCAAC AAAAATAAAG AACGAGATTT 540

AGCCATTATT GCCCTTCTCT TGGCATCTGG TGTTCGCTTA TCTGAAGCTG TTAATCTAGA 600

TCTAAGAGAT CTCAATCTAA AAATGATGGT TATTGATGTT ACTCGAAAAG GTTGCAAACG 660

TGACTCAGTC AATGTCGCTG CTTTTGCTAA ACCTTATTTA GAGAATTATC TGGCCATTCG 720

GAATCAACGC TATAAAACGG AAAAAACAGA TACAGCCCTT TTTTTAACTC TCTACAGAGG 780

TGTTCCTAAT CGTATCGATG CTTCTAGCGT TGAGAAAATG GTTGCTAAAT ACTCAGAGGA 840

TTTTAAAGTG CGTGTAACAC CCCATAAACT GCGCCATACA CTAGCAACTA GGCTCTATGA 900

TGCGACTAAA TCACAAGTTT TAGTCAGTCA CCAACTAGGA CATGCTAGCA CACAAGTCAC 960

TGACCTCTAT ACCCATATTG TTAGTGATGA ACAAAAGAAT GCTCTGGATA GTTTATGATT 1020

TTACGTATTT TAAATTATGT AAATAAATAT CAAAAAAAGA AGTTGGCCAA CTTCTTTTTG 1080

ATTTATCCAA CTACCGCTTC AGCGATTTCT TCACGGCTAA TACCAGCGAA GTAGCGTGTG 1140

ATATCAATGG TTTTTAGCGC CTTAAGAACA TCTTCGCGTT CGTATTTCAC CCCACGAAGG 1200

ACATCTTCTA CTGCAGCAAC GTCTTCAATA CCAAAGAAGT CACCATAAAT CTTGATGTCT 1260

TGGATTTTTG ATTCAGTAAC GTTAGCAAAG ACTTCAACCT TACCACTAGT GAATTTGATT 1320

CCACGACGGA CGTTAAATTC AGGTGATTTA CCATAGTTCC AGTCCCAAGT TCCAAACTTA 1380

GTATCCTTGA TGCGATTGAT TTCGGCCAAT TCTTCTTCTG AAAAGACGTA TTCAGTCATC 1440

TCTGGGTACT CTTTTTTCAT GTATTCCAAG AGTAAATCAC GGAATTTTTC GACTGTGATT 1500

TTTTTTGGTA ATTCATTGAT AATATTGGTT ACACGGGCAC GGACGGATTT CACACCTTTT 1560

GATTCAAATT TATCTTTTGA AACCTTAAGG GCATTTGCGA GGACTGACAA ATCAACGTCA 1620

AAGAGCAAGC AACCGTGGTG CATGATACGG CCGTTGATAT AGGCTTGGGC ATTGCCACAG 1680

AACTTCTTAC CATCAATCTC AAGGTCATTA CGACCTGTGA ACTCAGCTTT AACCCCAAGT 1740

TGAGCCAGGG TATTGATAAC CGGAGTTGAG AAGCTCTTGA AGTCAAATGC CTTATTTTCA 1800

TCTTCTTTGG AGATGATCGT GTAGTTGAGG TTATTTAAAT CGTGGTAAAC AGCTCCACCA 1860

CCACTAATAC GGCGAACTAC CTCAATACCA TTTTCGCGAA CATAATCACG GTTGATTTCT 1920

TCGATAGTGT TCTGGTGACG ACCAACAATG ATAGATGGCT TGTTAATCCA AAGTAGGAAG 1980

ATTTGATCCT CATCCAAAAG GTGTTTAAAG GCGTATTCTT CCAAGGCAAT ATTAAAAGCA 2040

GTGTCATTTG AATGATTGAT AATGTATTTC ATGATATCCC TTTACTTTAT ATGATAGAAA 2100

CTGGAAATAA CCTTCCAGTC TAATCTATCT TCGTTTTATT TTTTCTTAGG TGAATGGATG 2160

GCCATTCCTA GAACATCTGC AAACGCTTCG TACATCACTT CAGAGTAAGT TGGGTGCCCG 2220

TGGATGGTCT TCAGCATTTC CTCAACAGTG ATTTCCATTT CGATGATGCT TGATGCTTCG 2280

TTTATTAATT CTGCGGCTGC AGGACCAATA ATGTGTACAC CAAGGATTTC TCCGTATTTC 2340

TTATCAGCGA TAACTTTTAC GAAACCTTGA GCTGCGTCAG ATGCAATAGC ACGACCGTTA 2400

GCAGCAAAGT TAAACTTACC GATGGCAACA TCGTATTTCT CACGGGCTTG TTCTTCTGTC 2460

AAACCTACTG CTGCTACTTC AGGGAGAGTG TAGATGGCTG CAGGAGTCAA ATTCAATTTG 2520

GCAACTGCAT GATTTCCTTT AAGGGCATTT TCAGCGGAAA CTTCACCCAT GCGGAAAGCT 2580

GCGTGAGCCA ACATCTTAGT ACCGTTGATG TCACCTGGTG CATAAATGCC TGGAACTGAA 2640

GTTTCCATGT ATTCGTTGAC CTTGATACAA CCACGATCCA ATTCAAACTC AACCTCTCCA 2700

ATACCTTCAA GGTCTGGCAT ACGACCAATT GAAAGAAGAG CTTTGCTTGC GATGATATCG 2760

TCTTTTCCTT CAACCTTGAT ACGAAGTTGA CCATTTTCCT CAATGATTTC TTGCAGTTTA 2820

GTACCAGTCA AGATGGTCAT TCCTTTACGC TCAAGAATCA AGCGAAGGTT CTTAGAAACT 2880

TCCACATCCA TAGCTGGAAC TATACGGTCC ATCATTTCGA TAACAGTCAC TTTTGAACCA 2940

AATGTCATGA AGGCCTGACC GAGTTCGATA CCGACAACTC CACCACCGAT GATAACAAGG 3000

CTTTCTGGCA CTTCGTTCAT TTCAAGAATG TCATCACTAG TCATGACAAG TGGAGATTCC 3060

ATACCAGGGA CGTTGATCTT GTTGACTTTT GAACCACCAG CAAGAATGAT TTTCTTGGTT 3120

TCAAGCAATT CAGAACCATT TACCAAGACG TTCTTGTCTT TAGTGATTGT ACCAATTCCT 3180

TTATGAACAG TAACTCCGTA GCTACGAAGA AGTCCTGCAA CACCACCAAC AAGAGTATTA 3240

ACAACTTTAG ATTTAGTTTC TAAAAGTTTT TCCATATCAA CAGTGAAGTT AGGATTTTCA 3300

ATCACGATAC CACGATTTGC AGCATGACCG ATATTTTCAA TAATTTCAGC GTTATGAAGG 3360

TAGGTCTTGG TTGGAATACA TCCACGGTTT AAGCAGGTTC CACCAAGTTC AGATTTCTCA 3420

ACAAGGGCAA CCTTACCGCC GAATTGGGCA GCTTTAATGG CTGCAACATA ACCAGCAGGA 3480

CCTCCACCAA TCACAACGAT ATCAAAAGCA TCATCGCTCT TACCATCATC GTTTGAGGTA 3540

CTTGCTACAG GTACAGGGCT AGCTTCTGGC GATGCTGCTC CAGCTGTTGG GATGTTTTCC 3600

CTTTCTTCAC CAAGGTAACC GATAACTTCC GTTACAGGGA CAGTTTCACC ATCTCCTTTG 3660

AGAATGGCAA TCAAGTACCC ATCTTCTTCG GCTTCCAATT CCATGCTGAC TTTATCAGTC 3720

ATGATTTCCA AAAGGATTTC TCCTTCTTTT ACAAATTCTC CGACTTTTTT ATTCCATTGG 3780

ACGATTTGTC CTTCTGTCAT ATCCACGCCG GCTTTTGGCA TAATTACTTC TAAGGCCATG 3840

TCTTCCTTCC TTTATCTATA TCTTAAAAAT GAATACTCTT GCTCTTAAAT TAACATTGAG 3900

ATTGGCGTTT CAATCAACTC TTTCAAGTCC TTCATAAACT TAGCACCAGC CATACCATCT 3960

ACGACACGGT GGTCAATGGT TAATCCTAAA CTCATGATTG GGCGAATCAC AATTTCACCA 4020

TTGACGACAA CTGGCTTCTC GATTGTCGAA CTGACACCAA GGATAGCTGA GTTGGGTTGG 4080

TTAATAATCG GACCAAAGGA CTGAACACCA AACATTCCCA AATTACTGAT TGTGAATGTT 4140

GAATTTTGTA ACTCACTTGG AGCCAATTTA CCATCCAAGG TACGGCCAAT AACATCCTTA 4200

AAGGCTACAA CCAGTTCTGA AAGACTCATC TTCTCAGCAT TGTAAACAAC AGGTGTCATC 4260

AATCCATTAT CCATCCCAAC TGCCATGGCA AGATTGACAT AGTTGTGAGT GATAATAGTC 4320

TTGCCATCTT CTGTCAATGA AGCGTTGATG TATGGGTGTT TCATAAGAGT CTTAACAACT 4380

GCAAGCGAAA GAAGGTCTGT TACAGTAGTC TTCTTCCCAG TTGCTTCCAT GATTGGCTCA 4440

AGAACCTTCT TACGAAGAGC CAACATTTCA GTCATATCAA CTTCATAGTT GAGGGTGAAG 4500

GTTGGCGCAG TCAAGTAAGA TTCAACCATG CGTTGGGCAA TAACCTTACG CATTGGTGTC 4560

ATTGGAATAC GCTCGATTTT ACCATATGGT GTTACGTTAT CAGGGACTTC TTCCACTTTT 4620

TCAATCTGAG CAGGAGATTT GATGCTATCG TTTTCGATAT TTTCAGGAAG CAGGGCCAAA 4680

ACATCCTTCT TCATGATTTT ACCACGATGA CCGGTTCCTT GGATTTCCTG CCAAGCAATG 4740

TTATGTTCGA GGGCAATTCG TTTTGCAAGT GGCGAAATGC GAACCACGTT TGTGTCTTTA 4800

TAAGTTTCCA CGTCTTCTTT GTGGACACGA CCGTTTGCAC CTGAGCCAGA AACGTCGTAG 4860

AGGTTTATCC CTAAATCATC CGCTAACTTT CTAGCTGCAG GAGTCGCTCT TAGCTTGTCA 4920

TCAGCCATGA CCTCTCCAAT TCTATTTATG ATACAAAGGG CGTCAAAAGC GACTGAAAAA 4980

TAGGAAATCG ACGATGGCTT CGATGAAGCC AAGGAGATTT ATCTTTTTTC CGATCTTTTA 5040

GCCCGTGCTC TAATCTAAGA TATTAATGAC GAAGAGCTCT GCACCTAAAA GATACAAAGT 5100

TTCTCGTCAG CTTTATTTTA TTTACATAAC TTATCTTATG TAACCCTATT CTTTGTTATA 5160

AGTTTTTCGG ATTGCATCTT TGATACTTTC AACTGTTGGA ATCATTGCAT TTTCTAGGTT 5220

TTGTGCATAA GGCATCGGCA CATCTTCTCC TGCACAACGG CGAATTGGTG CATCTAGATA 5280

GTCAAATGCT TCTGATTCTG AAATAATAGC TGAAATTTCA CCGATATAGC CACTTGTTTT 5340

GTGGGCATCG TTGACCAGAA CAACCTTACC AGTCTTCTTC ACTGAGTTTA TGATGATATC 5400

CTTATCAAGC GGAACAAGGG TACGTGGGTC AACAATTTCA ACTGAAATTC CTTCTTCTGC 5460

TAATTCTTCA GCAGCTTGAA CCACACGGCG AAGCATTTTT CCATAAGTAA CAACTGTTAC 5520

ATCCGTTCCT TGGCGTTTGA TTTCACCAAC CCCAAGTGGA ATTGTGTAGT CTGGATCAAC 5580

TGGCACTTCC CCTTTTTGGT TAAATTCTGA CTTGTACTCA AGTATAATAA CTGGGTTGTT 5640

ATCACGGATA GAAGACTTAA GCAGGCCTTT CATGTCCGCA GGTGTTCCAG GTGCCACAAC 5700

CTTAAGTCCT GGAATGTGAG TAAACCAAGA CTCTAGAGAT TGTGAGTGCT GGGCGGCAGA 5760

GCCAACTCCG TTACCAGCTG CACAACGAAC AGTCATTGGA ACCTGACCTT TACCACCAAA 5820

CATGTAACGT GTTTTAGCAG CTTGGTTGAC GATATTGTCC ATGGCAATAA CAGAGAAGTC 5880

CATGAAGGTC ATATCGACGA TTGGACGAAG TCCTGTCATG GCTGCTCCTG CTGCTGCTCC 5940

AGAGATGGCA GCTTCAGAAA TCGGACAGTC ACGGACACGT TCTGGACCAA ATTCTTCAAG 6000

CATTCCAACA GAAGTACCGA AGTCTCCTCC GAAGACACCG ACGTCTTCTC CCATCAAGAA 6060

CACATTTTCA TCGCGACGCA TTTCCTCAGA CATAGCAAGG ATAATGGTGT CACGGAAGGA 6120

CATTGTTTTT GTTTCCATTT TATCTCTTTC TCCTTAGTCT GCGTAAATAT CTTCAAAGGC 6180

TGATTCAAGC GGTGGGAATG GGCTTTCCTC TGCAAATTTA ACAGAAGCTT CTACTGCTTC 6240

CTTTACTTGC GCTTGGATTT CTTCCAATTC TTCGGCACTT GCAATGTTAT TTTCAATAAG 6300

GTAATTGCGG AGGTTTTCGA TTGGATCTTT TTGTTTCCAC AATTCCACTT CTTCACGCGT 6360

ACGATATTTA CCAGGGTCAG ATGATGAGTG ACCGAGCCAG CGATAAGTTA CACTTTCAAT 6420

CAAGACTGGA CCATTGCCAC TGCGAACATG GTCCACAGCT TTCTGAAATC CTTCATAGAC 6480

ATCGATGACA TTGTTACCGT CTTCGATGAA CATTCCAGGA ATTCCATAAG CGGCGCTACG 6540

TTGATGGATA TGTTCTATAT TGGTCATTTT CTTGATATCC GCAGAGATAC CGTAACCGTT 6600

GTTAATGCAA TAGAAAATGA CTGGCAGGTT CCAGATAGAA GCCATGTTCA CTGCTTCGTG 6660

GAAAACACCT TCATTGGTCG CACCATCTCC AAAGAAGCAG ACAACGATTT TACCGGTATT 6720

TTGCATTTGC TGACTGAGGG CTGCACCGAC AGCGATCCCC ATACCACCAC CTACGATACC 6780

ATTGGCACCA AGGTTCCCAG CATCAAGGTC AGCGATATGC ATAGATCCAC CTTTCCCTTT 6840

ACAGGTTCCA GTGTATTTAC CAAGGATTTC AGCCATCATT CCGTTGAGGT CAATCCCTTT 6900

AGCAATAGCT TGCCCGTGTC CACGGTGGTT TGAGGTAATC AGATCATCTG GATTGAGAGC 6960

TAACATAGCC CCCACGTTAG CTGCCTCTTC ACCAACAGAA AAGTGCGTCA TTCCTGGCAC 7020

TTTCCCTTTC TTTACTAATT GTGCAATTTT TAAGTCCATG CGACGGATTT CTTCCATCTT 7080

ACGGAACATT TCTAGCAAAA GATTTTTATC TAAAGTTGAC ATCTTCTTGC CTTTCTAACT 7140

TTCTTCTTAC CTTACTATTT TACCGCTTTT GGCAAATACT GTCAAAGTTT TTCTAAAAGA 7200

AATTTCACAA AATAAAAAAG AAAACCCCGT GAAAACAAGG GATTTTCTTG TCAAGAATAT 7260

TTTTTCACAA ACTTTTTAGC ATTTGGATTT TGCTAAAGAT TCAAATCTCT TCATAATCAC 7320

AGTTAAACGC CAACGGTAGA GCGCCCCGCT CACAATCAAA CTAATAATCA AGCCGATCCA 7380

GTAAGAATAA GCTCCAAAAT CTGTTAGGGA ATCAAATAGC GTAnCACAGG GATTGCTACG 7440

CCCCAATAAC CAAGCAAACC AAGGTAAAAA GGAATAACTG TATCCTTATA CCCCCGCAAA 7500

ATTCCCTGAA GCGGCGCCGC AAAGGTATCT GCTAACTGGA AGAAAAGACT ATAAGTTAAA 7560

AAACGCACTG TCAAATCGAT AAATTTTGGG TCGTTACCAT AAAGACTGGC CACATTTCCC 7620

CTAAAAATGT AAAGGAAGGT TAAGGTGAAG GCCGCAAAAA TGAGGGCAGT CCATCTTCCT 7680

AGACCAATAT AGGTTTTCGC ATCATCAAAT CGCTTGGCTC CCACTTCATA GGAAACGACA 7740

ATAGCCATAG CCGATGAGAT ACTCATAGGA AAGGCGTACA TAAGACTTGA AAAGTTCATA 7800

GCTGACTGGT GACTAGCTAT AATCAAGGGC GAAAACTTAG CCATAATCAA GCCAACCACT 7860

GAAAAGATAG CCACTTCCGC GAAGACAGTT CCCCCAATAG GCAGACCTAA ACGAACTCCT 7920

TCCTTAATTT TATCCATATT AAGTGGAATT CGTTTCTCAA GGTGTAAGGC TTTGAGCTTC 7980

TCCTGTTTAA ATAAAACCAG AACAGAAATC CCAAGCAAGA CCCAGTAGGC CAAGGATGTT 8040

CCTAAACCAG CACCAGCCCC TCCCAGTTCT GGAACACCAA AGGCACCGTA AATCAAGAGA 8100

TAGTTAAATC CGCTATTGAG AGGGAGTAAC AAAAGCATGA GGTACATGGA CAGTTTGGTC 8160

AAGCCCAGCG AATCCAGCAA GGAACGAATG ACGCTAAAGA GCAACAAGGG GATAATCCCG 8220

ATAGATAAAA ACCAAAGATA GCGAACCGCT ACTGCCGCTA CTGCTGCTTC TAACCCAATA 8280

TGATTCAAGA TTATTGGTGC CAAGAAAAGT ACCATCCCCA GCAAGACCAC AGATAGGCCC 8340

AAGGCCAAAT AAATAAATTG GTAAAAATCA GACGCAACTT CTTCCTTTTT GCCTCGACCA 8400

990

AGATGGTGAC CAATGATAGG CACCAAGGCT GACACAATCC CTGTTAGAAA TGTAAAGAAA 8460

GGATTCCAGA TACTGGTTGC CATAGATACA CCAGCCAAGT CCATAGTGTT GTATTGACCT 8520

GTCATTGCAG TATCAACAAA AGAGGCAGAA TAATTGGCAA ATTGGTAGAT CAGGATTGGG 8580

AAGAAAATTT TTAAAAATAA TACTAACTTC TCTCGTAAAC ACTTTGTCTT ATACATACTT 8640

CTCTTTCTAT TCTGATTTAT CTAAACCAAA GAGTTTCAGA CCATAGTTTT TCAAACTTAG 8700

CGGAGGTTTA TTAGATTTTG AAGTAGTATG CCAACACGCA CATGTACGAC AATAATAGCT 8760

TCTAACTAAA CCTCCGTTAT CATATTGAAC CGCATGGTCA GCTTTTTCTT TAGTTTCATA 8820

TTGAATTTTG GAACGATTAG CTGCGGGACA GTAAATTCCA CTATTAGATT TCGCTTGTCT 8880

CTCCCTACGT TTTCGAAAAT AATTCATATT CTAACTCCTA TCAAGCTTGA TAGACGATTT 8940

GTCCCTTACA GATGGTATAT TTAACCTGCC CTTTTAAGGT TTCACCGATG AATGGTGAAT 9000

TAGCTGCTTT GGAAGCAAAA TGGGAGTCCA CAAAGCGGTC AGCCTTGGCA TCAAAAATAG 9060

TGATATCTGC TGGACCATTC TCAGCCAAGT AACCTGCTTC AAAGTTGTAA AGCTTGGCTG 9120

GGTTGTATGT CATTTTTTCA AGTAATTCCA TCAAGCTCAA CTCACCAGCT TCTACTAAAT 9180

AGGTCAAGCT GAGAGACAGG GATGTTTCTA AGCCAGTCAT ACCAGATGGC GCTTTGGTAA 9240

TATCCTCAAC ATTTTTTTCA TCTACATGAT GAGGCGCGTG GTCAGTCGCA ATAACTGTGA 9300

TGACACCTGA TTTGAGACCT TCGATAACGG CACGACGGTC TGATTCCAAA CGAAGCGGTG 9360

GATTCATCTT AGCATTGCTA CCTTGTGTTA AAAGAAGTGC TTCTGTCTTA GAGAAATGCT 9420

GTGGCGCTAC TTCTGCTGTG ACTTCTGCAC CTAACCCCTG AGCAAACTCC ACTACTTTAA 9480

CACTTTCTTC CTTAGACAAA TGCTGGATGT GAACATGGGC TTTAGTTGCA TAGGCAATCA 9540

TGACATCACG CGCCATCATA GCGTACTCAG CCACCCCAGT AGCACCGCAG ATATGGAAAT 9600

GTTCTCTAGC AATATTTTCA TTAAAGCCAA GAACACCGTT CAAACCTGGA TCTTCCTCAT 9660

GAAGGCTGAT AAAGGTATTG AGTTTTTTGG CTTCCTCCAT GGCTTCCTTG ACAATCTTAC 9720

TGCTCTCAAG CGGAATACCG TCATCAGAGA AACCAACCGC ACCAGCTTCT AAGAGTGCCT 9780

TAAAGTCAGT CAAGTTTTTA CCATTAAAGT TTTTAGTAAT GGTCGCAACT GTCTTGACAT 9840

TAATCTTCTC TTTGGCAGCT GACTGGAGAA CTGCTTGCAA AGTCTCCACG TCTGAAATGG 9900

TTGGACTGGT ATTAGCCATC ATGACGACAG TAGTAAAACC ACCTGCAGCG GCTGCTAGGG 9960

CACCAGTATG AATGTCTTCT TTATGTGTTT GACCAGGTTC ACGGAAATGA ACATGAATAT 10020

CGACCAAGCC AGGAGCAACC ACAAGACCAG TAGCATCAAT CGTTTCTGCT CCTTCTTCCG 10080

TGATCTCAGA CGCAATTTTG ATAATTTTCC CATCTTGAAC TAAGACATCA CAAACTTGAT 10140

CCAAACCAGA CTTGGGATCC ATTACACGAC CATTTTTGAT TAGTAGCATC TGCTTTCTCC 10200

TTTATTCATA GAAATCAACT TGGGTATCCA ACAATTTATC CCCATCATAA ACAAACTTGG 10260

CTGAAAAGAA GGGTTTATCC TCTAAAAGCC ACTCAACAAA GGTGTGGTCA CCTTCCCAAG 10320

TCGGCTTGCT CAAAACCTCA TCATAGGGAA CCCATTCTAG CGTCCCCTCA TTGCAGTCAA 10380

TCAAGTCGCC CTCAAACTCC GTCACCTTAA AAACATAGGT GTACCAGTCT AAATCTGGTG 10440

TAAATTCAGG AAAAGTGATG ACACCTTTTA GAACTGGCTT GGCTTTGAGC CCTGTTTCTT 10500

CAAGGATTTC ACGCGCCGCG CATTCCTGGG GCGTCTCTCC TCTCTCTAGC TTACCACCCA 10560

CACCAATCCA TTTCCCTTCA TGGACATCAT TGGGTTTCTT ATTACGATGG AGCATGAGCA 10620

GTTCTTTCCC ATTATCAATG TAGCAAATCG TCGCTAACTG AGGCATATTT TCTCCTTATC 10680

TAAGCCAATC GATTGGCTCT TGTCCTGTCT CTTTTAAGAA TGCATTGGCC TTGGAAAAGG 10740

GCTTGGAACC CCAAAATCCT CTATAAACCG ACAAAGGACT TGGATGGGCT GATTCGATAA 10800

TCAAGTGATG AGGATTGGTA ACTAATGCCT TCTTCTTACG TGCATAAGCT CCCCAGAGTA 10860

CAAAAACGAC TGGTCTATCT AGATGATTGA CCACCTGAAT CACAGCATCA GTAAAAGGCT 10920

CCCAGATTTG ACCAGCATGA CCATTGGCCT GTCCAGCAGG AACAGTCAAA CAAGCATTAA 10980

GAAGCAAGAC TCCTTGCTCA GCCCAAGCTG TCAAATCATG AGATTTCTTA ACTCCGATAT 11040

CATCTGACAA TTCTTTCAAG ATATTTTGCA AGGATGGTGG AGCTGGGATA GAGTCAGGTA 11100

CAGAAAAACT CAAGCCCTGC GCTTGACCTG GTCCGTGATA GGGGTCTTGC CCTAGAATTA 11160

CCACCTTAAC TTCTTCAAGC AGTGTTGTCA AGAGAGCCTG AAAAACCTTT TCCTTGGGTG 11220

GATAAATAAT CCCCTGAGAA TAGACCTGCT CCATAAACTG ATTGATTTTC CCGAAATAAC 11280

CCTCAGGTAA TTGCGCCTTA ATCAAAGCAT GCCAAGACGA GTGTTCCATA GCCGACTCGG 11340

(2) INFORMATION FOR SEQ ID NO: 148:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 12127 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 148:

AAAAAATAGA CTTGTTAGAC TATAAATGTA GTAAGCCTAC ACAAGAAAAA TACATAGAGA 60

TAAAGGTGAT TATTATGAAA TTCAAAAAAA TGCTTACTCT TGCAGCCATT GGCTTATCAG 120

GATTTGGGCT TGTTGCCTGT GGCAATCAGT CAGCTGCTTC CAAACAGTCA GCTTCAGGAA 180

CGATTGAGGT GATTTCACGA GAAAATGGCT CTGGGACACG GGGTGCCTTC ACAGAAATCA 240

CAGGGATTCT CAAAAAAGAC GGTGATAAAA AAATTGACAA CACTGCCAAA ACAGCTGTGA 300

TTCAAAATAG TACAGAAGGT GTTCTCTCAG CAGTTCAAGG GAATGCTAAT GCTATCGGCT 360

ACATCTCCTT GGGATCTTTA ACGAAATCTG TCAAGGCTTT AGAGATTGAT GGTGTCAAGG 420

CTAGTCGAGA CACAGTTTTA GATGGTGAAT ACCCTCTTCA ACGTCCCTTC AACATTGTTT 480

GGTCTTCTAA TCTTTCCAAG CTAGGTCAAG ATTTTATCAG CTTTATCCAC TCCAAACAAG 540

GTCAACAAGT GGTCACAGAT AATAAATTTA TTGAAGCTAA AACCGAAACC ACGGAATATA 600

CAAGCCAACA CTTATCAGGC AAGTTGTCTG TTGTAGGTTC CACTTCAGTA TCTTCTTTAA 660

TGGAAAAATT AGCAGAAGCT TATAAAAAAG AAAATCCAGA AGTTACGATT GATATTACCT 720

CTAATGGGTC TTCAGCAGGT ATTACCGCTG TTAAGGAGAA AACCGCTGAT ATTGGTATGG 780

TTTCTAGGGA ATTAACTCCT GAAGAAGGTA AGAGTCTCAC CCATGATGCT ATTGCTTTAG 840

ACGGTATTGC TGTTGTGGTC AATAATGACA ATAAGGCAAG CCAAGTCAGT ATGGCTGAAC 900

TTGCAGACGT TTTTAGTGGC AAATTAACCA CCTGGGACAA GATTAAATAA AATGTTTGCT 960

CCATAAATCT CTAAAGAGAT GCAGACGTTT CATCGTACAA TAAGATAAAG AAGGCAAGTA 1020

GGGAGGTGTC GTATCTCCCT TACTTTCTTC ACTAGAAAGG ACAAGATGTG ACAAAACAAG 1080

CCTTCAAAGA AGCAGTTTTT AGGGCAATTT TTTTCATGAG TGCAACAGTA GCTGTTGTAG 1140

CTATTTTGCT AATCTGTTTC TTTATTTTTA GTAATGGCTT ACCTTTCATA GCTAACTACG 1200

GCTTTGCCCG TTTTTTATTA GGCAGTGATT GGTCGCCAAC GAACATTCCG GCAAGCTATG 1260

GTATTTTACC AATGATCGTT GGTTCCTTAT TAATTACCTT AGGAGCGATT GTGATTGGGG 1320

TGCCAACAGG CATCTTGACA TCGGTGTTTA TGGTTTATTA TTGTCCAAAG CCCGTCTATG 1380

GCTTCTTAAA ATCAGCTATC AACTTGATGG CAGCCATTCC ATCTATTGTT TATGGTTTTT 1440

TCGGCCTACA ATTATTGGTG CCTTGGATTA GAAGCTTTTT AGGAAATGGC ATGAGTGTCC 1500

TAACCGCTTC GTTACTATTA GGAATAATGA TTTTGCCAAC CATTATCAGT TTGTCAGAAT 1560

CTGCTATCCG AACAGTTCCC AAAACGTATT ATTCTGGTAG CTTGGCTCTA GGAGCTAGTC 1620

ATGAACGGAG TATTTTTAGT GTCATCTTGC CAGCTGCGAG ATCTGGTATT TTATCAGCAG 1680

TTATTTTAGG AATCGGTCGC GCAGTAGGTG AAACCATGGC AGTTATTTTG GTGGCAGGCA 1740

ACCAGCCGAT TATTCCAAGT GGACTCTTTT CAGGAACCAG AACCTTAACA ACCAATATTG 1800

TTCTGGAAAT GGCTTACGCA TCAGGTCAGC ATAGGGAAGC CCTTATTGCA ACCTCAGCAG 1860

TTCTCTTTTT CCTTATTCTC TTGATTAATG CCTACTTTGC CTACTTGAAA GGAAAATCAT 1920

CTTATGAGTA AATACCTGCT AAAACTTCTC GTTTATTGTT TTTCAGCTTT AACCTTTGGC 1980

TCTCTCTTTT TAATCATTGG TTTTATCCTC ATCAAAGGCT TACCTCATCT AAGTCTATCC 2040

CTCTTTTCTT GGACTTATAC TTCTGAGAAC ATTTCCCTTA TGCCAGCGAT TATTTCCACC 2100

GTTATTCTGG TCTTTGGTGC TCTTCTTTTA GCCTTGCCCA TAGGGATTTT TGCTGGTTTT 2160

TATCTTGTGG AATATACAAA AAAAGATTCC CTTTGTGTTA AAATCATGCG ATTGGCCTCA 2220

GATACCTTAT CTGGGATTCC TTCCATTGTT TTTGGTCTGT TTGGCATGCT CTTCTTTGTA 2280

GTCTTCTTAG GTTTTCAATA CTCTCTGTTA TCAGGAATCT TAACCTCAGT TATCATGGTG 2340

TTGCCAGTCA TTATTCGCTC AACAGAAGAA GCCCTTTTAT CTGTTAGTGA TAGCATGCGT 2400

CAAGCAAGTT ATGGACTTGG GGCAGGTAAG TTACGGACTG TTTTTAGAAT TGTTCTACCA 2460

GTTGCCATGC CAGGTATTTT AGCTGGAGTG ATACTAGCTA TTGGCCGTAT CGTTGGTGAA 2520

ACAGCTGCCC TCATGTATAC ATTAGGTACC TCTACCAATA CGCCAAGTAG TCTCATGTCT 2580

TCAGGCCGTT CTCTAGCCCT ACATATGTAT ATGCTGTCAA GTGAGGGGCT ACATGTCAAT 2640

GAAGCCTATG CTACCGGCGT GATTTTGATT ATTACTGTTT TAATGATAAA TACTCTATCA 2700

AGCTTATTAT CTCGAAAACT TGTGAAAGGA GCTTCCTAGT ATGGGAACAT TTTCAGTCAG 2760

ACACCTAGAC TTATTTTACG GGGATTTTCA AGCCTTAAAA AATATTTCGA TTCAATTACC 2820

AGAAAGACAG ATTACTGCCT TGATAGGCCC ATCTGGTTGT GGCAAATCAA CTTTTCTAAA 2880

AACCCTTAAC CGGATGAACG ATTTGGTTCC TTCTTGCCAT ATTGAAGGCC AAGTCCTCTT 2940

AGATGAGCAA GATATTTATA GTAGCAAATT CAACCTTAAT CAGCTACGTA AGCGTGTAGG 3000

GATGGTTTTT CAACAGCCTA ATCCCTTTGC CATGTCTATC TATGATAACG TGGCTTATGG 3060

CCCAAGGACA CATGGTATTC GAGACAAAAA ACAATTAGAT GCCTTAGTGG AGAAATCTTT 3120

AAAAGGGGCA GCCATTTGGG AAGAAGTCAA AGATGATCTT AAAAAGAGTG CCATGTCCTT 3180

ATCTGGCGGT CAGCAGCAAC GCCTTTGCAT TGCGCGAGCT TTAGCAGTAG AACCTGATAT 3240

TCTGTTAATG GATGAGCCGA CTTCAGCCTT AGACCCTATC TCCACTTTAA AAATTGAAGA 3300

CCTCATTCAG CAACTAAAAA AGGATTATAC GATTATCATT GTTACCCATA ACATGCAACA 3360

AGCTTCACGT ATTTCAGATA AAACTGCTTT TTTCTTAACA GGAGAAATTT GCGAATTTGG 3420

AGATACCGTT GACGTGTTTA CCAATCCAAA AGATCAGCGC ACAGAAGACT ATATTTCAGG 3480

ACGGTTCGGA TAAGGAAGGA AAAACCTATG AGAAATCAAT TTGACTTAGA ATTGCATGAA 3540

TTAGAACAAT CCTTTTTAGG ACTAGGGCAA CTTGTCCTTG AAACAGCTTC AAAAGCCTTA 3600

CTGGCCTTAG CCTCCAAAGA CAAGGAGATG GCAGAGCTAA TTATCAATAA GGATCATGCT 3660

ATCAACCAAG GTCAAAGCGC TATCGAATTG ACCTGTGCCC GTTTGTTGGC CTTGCAGCAG 3720

CCACAAGTGT CTGACCTTCG ATTTGTGATT AGCATCATGT CTTCTTGTTC AGACCTTGAA 3780

CGTATGGGAG ACCATATGGC AGGCATTGCC AAAGCTGTTT TGCAACTAAA AGAAAATCAA 3840

CTAGCCCCTG ACGAAGAACA GTTACACCAA ATGGGTAAAT TATCCCTCAG CATGCTAGCC 3900

GATTTATTGG TTGCCTTTCC TTTGCACCAA GCCTCAAAAG CTATTAGTAT TGCTCAAAAA 3960

GATGAACAGA TTGACCAATA TTATTATGCC TTATCAAAGG AAATCATTGG ACTTATGAAA 4020

GACCAAGAAA CCTCAATTCC CAATGGAACT CAATACCTTT ATATCATAGG GCATCTGGAA 4080

CGCTCGCTGA TTACATTGCT AACATTTGTG AACGCCTAGT CTACCTAGAA ACAGGAGAAC 4140

TAGTGGATTT GAATTAATTC AACTAATCCT TAAAAGAGAA GAGTACGATT AAGTACTCTT 4200

TTTTATGGTT GTAAAAAAGT TCATTTGACC AATTTAAGCA GTGTAGATAG TGAGGAGTTG 4260

TTTCAATTCT ATCGTGAACG AGGGAATGCT GAAAACTTTA TCAAAGAAAG GAAAGCAGGA 4320

TTCTTTGGGG ATAAGACAGA TAGTTCGACC ATGATTAAGA ATGAAGTACG TATGATGATG 4380

GGCTGTCTGG CTTATAATCT CTACCTCTTT TTAAAGCAGC TAGCTGGTGA TGAAGTAAAG 4440

TCCTTGACTA TCAAGCGTTT TCGACGTCTC TTCCTTCATA TTGCCGGAAA ATATGTCTCT 4500

ACTGCTAGAC GACATATTCT CAAATTCTCA AGTCTATACG CCTATTCAAA ACAGTTTCAA 4560

GCCTTATTTG ATACAATCTG CCAGATAAAT CTGATACTCC CTGTTCCATA TAGAGCTAGA 4620

GGGCAGGGGA AAACATGCCT AACAGAATAA GTCACCTTAT TTTAAAAATC GAGCATCAAA 4680

CCAAGGGAGG AGTCTGCCCT TTTTTAGGAA AAAATCAAGA CAAATCTCCT CAATTATGTC 4740

TCGAACATCA GAAATTAAGC AAAATCACCA GAAGGACAGT ATTTCAACTA GCTTTTCTGG 4800

TAATTTTTGA ACTGTGTAGT TCGTTAGTGC CAGATATGAA TAATTTGGGA TGATAAATCT 4860

TTCTTCCTCA GGTAGCCTAT CATAATACTC TTCAAAAATC TTATCAAAAA CACTCTCTTT 4920

CTTTTGGGCG ATAGTTTCAT CTTCGTATGT AGGAGTCCTC ATCAAGAAAT ACTTCAATTC 4980

TAGGTATTCC TTATCCAACT CTATATAACT TGGCATCAAC TTGTAATCTT CAACCCCCAA 5040

ACGTTCAGCA ATATATTTTA ACTTTGTTAG TATTGGTCTG GATTCTCCAT TTTCAATTCT 5100

AATTAATTGA CGGATACTTA ATTCAGACTC ATCACCACAA AATTCTGAAC GACTGATTTT 5160

TTTAGCCAAA CGTAATCTTT TAATTTTTTC GCCAAACTCT CGCAACCTAC AAGAACTTCC 5220

TGAGTTGTTT ACCTCTATTA TAAGCATATA CTGAATCAAA CTATCTATCA GATTTCTTCT 5280

CACTTTAACT AAAGACTAAG AGTTTATCCC TTCGTCTCGG TTTTTGTGTA TTTTTCCACC 5340

ATACCCCAGT AATGCAAGTG CAAAATCCCC TAGAATATGA TAGAATAAGA GAAAGAACTC 5400

TATCAAGGAG GAAATCATGG AAAAACAAAC CGTCGCCGTC TTGGGGCCTG GTTCTTGGGG 5460

AACCGCCCTT TCACAAGTCT TAAATGACAA TGGACACGAG GTACGTATTT GGGGAAATCT 5520

TCCCGAGCAA ATCAATGAAA TTAATACACA CCATACTAAT AAGCACTACT TTAAAGATGT 5580

CGTTCTAGAC GAAAATATCA TTGCCTACAC CGACTTAGCA GAAACATTGA AAGATGTGGA 5640

TGCGATTTTG TTTGTTGTCC CAACAAAAGT GACACGACTT GTTGCCCAGC AAGTTGCACA 5700

AACCTTGGAC CATAAGGTTA TCATCATGCA CGCATCAAAG GGATTAGAAC CTGATAGCCA 5760

TAAACGATTA TCAACCATTC TTGAAGAAGA AATTCCTGAA CATCTCCGTA GTGATATCGT 5820

CGTTGTTTCA GGGCCTAGTC ATGCAGAAGA GACCATTGTG CGTGACCTAA CTTTAATAAC 5880

TGCTGCTTCT AAAGATTTAC AAACAGCTCA ATACGTTCAG AAGCTATTTA GTAATCACTA 5940

CTTCCGACTT TATACCAATA CGGATGTTAT CGGGGTTGAA ACTGCTGGTG CTCTTAAAAA 6000

TATTATTGCT GTCGGTGCTG GAGCTTTACA TGGTCTTGGA TTTGGTGATA ATGCTAAGGC 6060

AGCCATCATC GCTCGAGGTT TAGCAGAAAT CACCCGCCTA GGGGTAGCAC TCGGGGCCAG 6120

TCCATTGACC TATAGCGGCT TATCTGGTGT GGGAGATTTG ATCGTAACGG GAACTTCCAT 6180

CCACTCTCGT AACTGGAGAG CTGGAGATGC TCTCGGACGA GGAGAATCCC TAGCTGATAT 6240

AGAAGCTAAT ATGGGCATGG TAATCGAAGG AATTTCAACG ACTCGAGCAG CCTATGAACT 6300

AGCCCAAGAA CTTGGAGTCT ATATGCCCAT TACACAGGCT ATTTACCAAG TTATTTATCA 6360

CGGAACCAAT ATCAAAGATG CCATTTATGA CATCATGAAC AATGAATTTA AAGCAGAAAA 6420

TGAGTGGTCT TAACCCTCTA TAGAAAGGAT TTTTATGACA TCAAAAGTTA GAAAGGCAGT 6480

CATCCCTGCT GCTGGACTAG GAACTCGATT TTTACCAGCA ACCAAGGCCC TTGCCAAAGA 6540

AATGTTGCCA ATCGTAGACA AACCAACTAT CCAGTTTATC GTGGAAGAAG CTCTCAAATC 6600

AGGTATTGAA GATATTCTAG TTGTCACTGG TAAATCAAAA CGTTCTATTG AGGACCACTT 6660

TGATTCAAAC TTCGAATTGG AATATAACCT CAAAGAAAAA GGGAAAACAG ATCTTTTGAA 6720

GCTAGTTGAT AAAACAACTG ACATGCGTCT GCATTTTATC CGCCAAACTC ATCCACGCGG 6780

TCTCGGAGAT GCTGTTTTGC AAGCCAAGGC TTTCGTCGGA AATGAACCTT TTGTCGTTAT 6840

GCTTGGTGAT GACTTGATGG ATATCACAGA CGAAAAGGCT GTTCCACTTA CCAAACAACT 6900

CATGGATGAC TACGAGCGTA CCCACGCGTC TACTATCGCT GTCATGCCAG TCCCTCATGA 6960

CGAAGTATCT GCTTACGGGG TTATTGCTCC GCAAGGCGAA GGAAAAGATG GTCTTTACAG 7020

TGTTGAAACC TTTGTTGAAA AACCAGCTCC AGAGGACGCT CCTAGCGACC TTGCTATTAT 7080

CGGACGCTAC CTCCTCACGC CTGAAATTTT TGAGATTCTC GAAAAGCAAG CTCCAGGTGC 7140

AGGAAATGAA ATTCAGCTGA CAGATGCAAT CGACACCCTC AATAAAACAC AACGTGTATT 7200

TGCTCGTGAG TTCAAAGGGG CTCGTTACGA TGTCGGAGAC AAGTTTGGCT TCATGAAAAC 7260

ATCCATCGAC TACGCCCTCA AACACCCACA AGTCAAAGAT GATTTGAAGA ATTACCTCAT 7320

CCAACTTGGA AAAGAATTGA CTGAGAAGGA ATAACAAAAT CATTTATATA AAGATTAGCC 7380

ACACATAAAT TAAGTAAATT CTCTACTTGA ATCTACCTAT TTAATAAAAA CTAATGAAAA 7440

CGCTATACTT GTATTTGTTT TTTCATTAAA ATAAGAGTAG AATAAATTAG TATAGTAAAA 7500

CAAAAAAGCA CCGAATCGGT GCGCACTTTT TCAAGTTGTG TACGGACAAA GCCTTATTTT 7560

AACTTTGCTA TGTTGTTTCT AATGGTTCCA AAATAATAAA TAATTTTAAA TTTGACTTAA 7620

CTGTTGGAGT AGTCATGGTT AAATTAAATC AACCGAGCCG AACATAAGTT GTTTAATTTT 7680

GTGGAAGCTA TTAATAAAAA TATAATAAGG GAGAAAGATA GGTGTAATTT TAATTTTAAA 7740

GTAATTGCGG ACACTATCAA AGAAAAAGAT TATGGAGAAC AAATTTGTAG AATTTATCGA 7800

AAACAATAAA AAAGTAATCA TTTCATCAGT TGCAGTTGGT GTTGTATTGG TATTAGGGTT 7860

TGGATGGTAT TCATATAACC AACAACAAGC AGAACAACAA GCAAAAATTG TACAATTAGA 7920

AAAAGATAGC AAATCAGACA AAGAACAAGT TGATAAACTA TTTGAATCAT TTGATGCATC 7980

TTCAGATGAA TCTATTTCTA AATTAAAAGA ACTATCTGAA ACTTCACTTA AAACCGATGC 8040

AGGTAAAGAC TATCTTAATA ACAAAGTCAA AGAATCATCT AAAGCAATTG TAGATTTTCA 8100

TTTGCAAAAA GGTTTGGCTT ATGATGTTAA AGATTCAGAT GACAAATTTA AAGATAAAGC 8160

AACTCTTGAA ACAAATGTAA AAGAAATTAC AAAACAAATT GATTTTATCA AAAAAGTTGA 8220

TGAAACTTTT AAACAAGAGA ATTTGGAAGA AACTCTTAAA TCTCTAAATG ATCTTGTTGA 8280

TAAATATCAA AAACAAATCG AACTTTTGAA GAAAGAAGAA GAAAAAGCTG CTGAAAAAGC 8340

TGCTGAAAAA GCAAAGGAAT CTTCTAGTCA AAGTAATTCT TCTGGTAGTG CTTCTAATGA 8400

GTCTTATAAT GGATCTTCCA ATTCAAATGT AGATTATAGT TCATCTGAAC AAACTAATGG 8460

ATATTCAAAT AATTATGGCG GTCAAGATTA TTCTGGTTCA GGAGATAGTT CAACAAATGG 8520

TGGATCATCA GAACAATATT CATCTAGCAA TTCAAACAGC GGAGCAAATA ATGTCTACAG 8580

ATATAAAGGC ACTGGTGCTG ACGGCTATCA AAGATACTAC TACAAAGATC ATAATAATGG 8640

AGATGTGTAT GATGACGATG GAAATTACCT TGGGAACTTT GGTGGCGGCA TTGCAGAACC 8700

TAGTCAACGC TAATAACTAT TTTAGAGCTG TGTTGTTTCG AATGGTTCCA AAACACATTA 8760

AAAGCTACTC ATTTTTTAAG TAGCTTTTTT CTTATTCAAG TTTACATATT ATACTCAATG 8820

AAAATCAAAT TCAAACCACG TCAGCATCGC CTTACCGTAG GTATGGTTAC TGACTTCGTC 8880

AGTTTCATCT ACAACCTCAA AACCATGTTT TGAGCTGACT TCGTCAGTTC TATCTACAAC 8940

CTCAAAGCAG TGCTTTGAGC AACCTGCGGC TAGCTTCCTA GTTTGCTCTT TGATTTTCAT 9000

TGAGTATTAG TCGTCACAAT CCCATTCCCT TGTAGAAAAG CAAAATGGCG AGTCCTACGA 9060

ACAAGACTAC CGCTCCTAAT CTCTGGCTGG TGTTATACAT CCGTTTTTCT CCTCTAACTG 9120

GAAAGATAAC TGCTAGAAAT GCGCCACCAA CTGCACCACC GATATGGCCT GCTAGGCTGA 9180

TTCCTGGAAT CAGAACACTT CCAATAATGT TAACCACAAA AAGTGTCAGA TAGGATTGCC 9240

CTAGCTGTTG GATATAAGGA TTGCGAGTTG CATAGCGAAG AACAATAATC GCGGCAAATA 9300

GCCCATAAAG AGAGGTAGAG GCGCCTGCTG CTAAGGATTT AGGACTAAAT ACAAAAACAA 9360

AGAGATTGCC CATCATTCCT GATAAAAGAT AGAGAAAGAA AAACTGCTTA GAACCGAAAA 9420

TCTCCTCTAC CTGCCTTCCA AGATAATAAA GTGAAAGCAT ATTAACAATG AAATGTTCCC 9480

ACCCAATATG AACAAAAATG GCAGACAAGA GACGCCAAAC CTGCTCGGGA AAGAGGCGAA 9540

TAGCTGGCCC ATACATGGCT CCAAATCGAA ATAATGTATC TGCCCTGTCA AAGTTTCCGC 9600

CTGCAGTGAC CAACATTAGT AAAAATACCA AGGCCGTCAC TAAGAGGAAG AAACTCGTCA 9660

CAGGGTAACG TCTATCAAAG ATTTCCTTCA TCAATTAATA CCTCCTGAAC AGGAATATCA 9720

TGGTTTTCAG GTATAAAGTC CTGAATTTGA CAAGGATATA TCGTACTCAA AGTACGACCA 9780

GAAAAATGTT CCAGATAGCG GTCATAATAG CCTCCACCGT ATCCTATCCG ATATCCTTTC 9840

GTCGTAAAAG CCAGACCAGG AACATGAATC AAATCAATCT GAGATGCATC CACCACTTCC 9900

AAATCTCCCT GTAGCTCCAG TAAGGCAAAG AAAGTTTTTA CCAACTGTTG CGGATCATAG 9960

ACCACAAAGT CCATGCGCCC CTTGGGATAA GTTTTGGGTA TTAAAACCTT CTTGCCGTCC 10020

TTCAGCGCCT GCTCAATCAG TTCCTGCGTT TGAAACTCAT GAGAAAAAGA GAGGTAGGTT 10080

GCGATGACCT TGGCTTCTTG ATAAAAGGGG TGTTGTAAAA GCCGCTCGGT TAAAGCTTGG 10140

TCTATAGCCT GTTTTTGCTC TTGAGATATA GCCTTCATTT CATGCAAGAC TTGCTTGCGT 10200

AATTCCGATT TCATAGACAA GCCCTCTATT CTGCTGCCTT CTTTTTCAGG AAACTAGACA 10260

CCGCAGCCAC CCCAATAGCT AAGACTTCTT CCTTAGGACT CATTTGAGGG TGATGAAGAG 10320

CGTAGGGACT ATCGATACCT AGCCAAAACA TCACGCCATC AACCTTTGAA AGGAGATAAC 10380

CAAAGTCCTC GCCTGTCATA GCAGGTTCGA TATCAATCAA CTCGATTCCG TCTTTTTCGT 10440

CAAAGAAGTC CATCAGTTCA CGCGCCAAGG CTGGATTGTT CTCAACAGGT AGGTATCCAC 10500

CTTGTTTGAG TTCCACTTCG ACTTCCATAT CAAAGGCAGC TGCAACCCCT TCTGCAACTG 10560

TTTTTACCCT CTTTTGCACC AAGAGACTCA TGTCCTGTGT CAAGGCACGA ATAGTTCCAT 10620

GTAAAAAAGC TGTGTCTGTG ATGACATTGT TGGTGGTTCC AGCTTGAAAA ACGCCGAAGG 10680

TCACCACTGC TCCCTCGATT GGGTTGACAT TGCGGCTAAC AACTGACTGC ACTTGGGTCA 10740

CAAAGTAACT AGCCGCCACC AAGGCGTCAT TGGCTTCATG AGGAAAAGCT GCGTGGCCAC 10800

CTTTGCCTTT GAAACGGATC TTCACCTCGC AAGTTCCTGC AAAGAGTGTA TGAGTATTAG 10860

TCGCAATCTG GCCGACTTTC AAATCTGGAC GAACATGGAG ACCATAGAAT TGATCTGGCA 10920

ACCAATCTCC AAAAGCACCG TCCTCATACA TGAGCATACC ACCAGCTTCA TTTTCTTCAG 10980

CAGGCTGAAA TAGAAAGAGC AGATTATTCT TGGGTTGCTC CTCAAGGGCG CGCTCAAGAC 11040

AGCCTAAGGC AATGGTCATA TGAAAATCAT GGACACAGGC ATGCATGCGA CCTTGGTGTT 11100

GAGAAGCAAA AGGTAGACCT GTTTGTTCGA CGATAGGCAG GCCATCAATA TCTGTCCGCC 11160

AACCAATGGT TCGCTCCGGC TGACTTCCCT GCAGGTAGAC CAAAATCCCT GTCCGCCAAG 11220

TACGAATTTG AACAAAATCC TTGCCCGTAG TCAATTTCTC AATCACATCC AGCAAATAAG 11280

CCTGAGTCTT GAACTCCTCC AAGCCAATCT CTGGAATCTG GTGTAAATCT CGTCTAGTCT 11340

GAATCAAATC TAACATCTAT CTGTCCTCCG ATATAGCAGA AAGAGGCTGG AAAAAGGGTT 11400

CCGCCTCTTT TTTACTTTTA CAATTACAAG GTACGAAGCG CATCCTCTAG CGCTGTTTTT 11460

TGTTGAGTTT GGGCATCAAT TTCTTTGATA ATACGAGCTG GAACACCTGC TACTACCACG 11520

TTTTCTGGGA CATCTTGGGT AACAATAGCT CCTGCTGCGA CAACTGAACC ACTACCGATT 11580

TGGACTCCTT CGATAACCAC TGCATTAGCA CCGATAAGAA CATTGTCTCC GACACGGACT 11640

GGTTCAGCAC TAGCTGGCTC AATCACACCT GCCAAAACTG CACCTGCACC AACGTGGCTA 11700

TTTTTTCCAA CGATGGCACG GCCACCAAGG ATGGCACCCA TGTCAATCAT GGTTCCAGCA 11760

CCGATTTCAG CACCGATATT GATAACAGAT CCCATCATGA TAACAGCATT GTCACCAATT 11820

TCCACCTGGT CACGGATAAT CGCACCTGGC TCGATACGAG CGTTGATAGC ACGCTTATCT 11880

AGCAAAGGAA CTGCAGAATT ACGAGCATCT TGCTCGACAA CATAATCTTG ATTTTCTACC 11940

AAACCTTCAA GAAGCGGAGC CACATCCTTC CAGTCTCCGA ATAGGACATT TCCTAGTTTG 12000

ACAACAGAGC TAGGCACAGC AGTTGCGAGT TGCCCCTCAA AGGTTACTTT GACACTGGTT 12060

TTCTTTTCAG CATTGGCGAT AAATTGGATA ATTTCTTGAG CGTTCATTTT TGTAGCAGTC 12120

ATAGGTG 12127

(2) INFORMATION FOR SEQ ID NO: 149:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 12566 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 149:

CCATCCTTCT GTTGATGTGA CAGGAATGAT GATAAATCAA CCAGTAGCTA GTCGCGAAGA 60

GGTGACAGAG GCTTTGAGTC ACTTGGCGGT AGAGCACAAT AGTCTCATTG CTCGTCGAAT 120